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Address.

THE DUTY OF THE HEALTH DEPARTMENTS IN THE ALCOHOL QUESTION.

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Health Commissioner of New York City.

THE state laws under which health boards or departments of health operate in most cases allow very general powers and broad jurisdiction over all matters affecting the health of the community. Any such delegation of authority to a small body of experts for the protection of all the people imposes by the same act proportionate responsibilities.

The community looks to its elected and appointed, salaried servants to protect the whole against the results of thoughtlessness, ignorance or malice of any individuals or groups, even at the cost of restraining personal liberty or appropriation of property. Not only is a high death rate quite properly a reflection upon the administration of local government and a gauge of the intelligence and social standards of a city or state, but it brings with it certain, though not generally observed, commercial disadvantages and burdens expressed in an increasing tax rate.

Similarly, certain types of disease are accepted as indices of a community's success in obtaining social justice and the advantages of a gregarious manner of life. The incidence of typhoid fever, the presence of rabies or smallpox, the tuberculosis sick rate and death rate, the infant mortality rate, are looked upon as truer measures of civilization than the number of churches, banks or libraries in a town. The economies of civil government require the saving of lives and the prevention of sickness to be accomplished at the minimum of expense.

The bookkeeping of public health administration demands two kinds of balance sheets, one kept by the statistician, the registrar of morbidity and mortality, the running account with sickness and death, the other the financial statement to the taxpayers, expressing in analytical form the end product of per capita cost stated in terms of community health. To do this honestly, the health officer must point out to the taxpayer what kinds of disease can be controlled by exercise of the police power of the State, and what disorders and disabilities and deaths can be diminished only by the voluntary acts or agreements of the individuals concerned. We have a fairly logical division of diseases into three classes from the sanitarian's point of view.

First in importance, up to the present time, have been the communicable diseases. The elimination of these has been the object of health officers throughout the world, and a cursory glance at the results will show that the disappearance of many and the great reduction of all has followed the discovery of the specific cause of the disease in a few instances, the method of transmission in many, and in several instances of a specific preventive or curative therapy. The technic of control of this class of diseases amounts almost to an exact science.

The second group are the diseases of occu-

pation,—the poisonings, the effects of dusts, the disturbances of health due to unsanitary environment of working places. Poisoning by phosphorus, lead, acids, the dusts of animal and vegetable products, are well recognized, and admirable results have followed intelligent application of suitable preventive measures. Education and tactful enforcement must combine to accomplish results.

The third group includes the disorders of development and function resulting from people's habits in their home or personal life, their habits of housing, eating, clothing, exercise, recreation. As can be readily seen, this last group is hardly amenable to other than educational treatment, for however exacting the building and labor laws, an uninstructed populace can bring about unsanitary and unhygienic conditions in excellent buildings and under generous conditions of employment.

Among the habits which bring individuals and communities to harm is the habitual use and abuse of alcohol. Its use is almost always a habit, and a harmful one, and its abuse invariably leads to rapid mental and physical degeneration. Section 1169 of the Charter of the City of New York specifies among the other duties of the Board of Health the following:

> "The Board of Health shall use all reasonable means for ascertaining the existence and cause of disease as peril to life or health and for averting the same throughout the city, and shall promptly cause all proper information in possession of said board to be sent to the local health authorities of any city, village or town in this State which may request the same, and shall add these to such useful suggestions as the experience of said board may supply."

Section 181 of the Sanitary Code states that:

> "No person shall knowingly or carelessly or negligently do or contribute to the doing of any act dangerous to the life or detrimental to the health of any human being, nor shall any person omit to do any reasonable and proper act or take any reasonable or proper precaution to protect human life and health."

What more authority or direction is required to oblige the Department of Health of New York City to collect facts as to the cause of any disease, to state the results publicly, and use all means to warn and protect the people against their danger?

What are the facts? The deaths from the epidemic of infectious colds, improperly called an epidemic of grippe, during the winter of 1916, resulted in 2000 deaths and probably was responsible for ten times as many serious cases of sickness. This epidemic aroused widespread interest, and was the subject of much discussion and attempts at education of the public by the Health Department of New York and other cities.

From the records of the Department of Health of the City of New York it appears that there are annually at least two thousand deaths admittedly due to the excessive use of alcohol. It is a matter of record that eight thousand cases of acute alcoholism are treated annually at Bellevue Hospital, New York. Anybody familiar with general medical practice or the service in the general medical wards in any hospital in the large cities of this country, where the use of alcohol is common in our large cities, will be willing to testify to the very considerable, if not determining rôle that alcoholic habit plays in the course and termination of a large proportion of the diseases which come under observation.

Is this not sufficient to justify the use of such powers as the Board of Health has to prevent the use of alcohol in the community?

Alcohol, a consistently depressing, habit-forming drug, causes characteristic easily recognized diseases of the brain, nerves and special senses. Alcohol causes definite damage to the heart, kidneys, blood vessels and organs of digestion, especially the stomach and liver. When alcohol is used so moderately as to cause none of the special diseases due solely to its effects, it is known to damage the unborn babe, the nursing child and the grown man and woman in such ways as to render them peculiarly susceptible to the infectious and communicable diseases to which all people are exposed.

Certain types of permanent damage to mentality, and various psychical disorders in children, are accepted results of the use of alcohol in parents.

Alcohol can be used as a food, but at a cost both economical and physiological, which causes bankruptcy of pocket and health. In a few diseased conditions it has been found useful, but not indispensable.

Alcohol is a protoplasmic poison, like ether and chloroform, with slower but more enduring effect.

Alcohol has the physiological effect of gradual anesthesia acting upon the powers of perception, judgment, self-control, reasoning and intelligence until the human being is gradually stripped of all capacity for conscious direction, and becomes a reflex animal responding automatically and without choice to gross external physical stimuli.

The weary human, suffering from the misfortunes of his own creation or harrassed by the injustices of an artificial social order, turns for separation from his environment to the dullness and unrestraint which alcohol brings. Then is he not only unprepared for effective effort, competition or responsibility, but he is exposed particularly to the ever-ready infection, of which acute pneumonia is the most striking example.

These statements are not personal opinions. The world admits them and then says: "What then! Shall we give up this happy thoughtlessness for the chance at a bit longer and bit healthier life?" And up to the present time the answer has been all but unanimously "No."

It is as I conceive it the duty of health departments to change the answer. How? By the use of the police power of the State, that broad and powerful arm of law under which so much of the authority of Boards of Health has been exhibited? By legislation, that hope of democracy, the mythical voice of the people acting through their elected representatives? Or by education and example, the weapon of the teacher, the physician, the friend?

What the church has failed to do, the factory and the shop have undertaken. What laws and police repression have failed to effect, the spoken and written word can accomplish.

If a flagon of alcohol were offered to a student of pharmacology to test as a curiosity, and he applied the standard methods of physiological experiment to it, he could but come to the conclusion that he was dealing with a more dangerous chemical than any now available in the whole range of materia medica, not second to opium or its derivatives as a destroyer of character, a disturber of function and a degenerator of tissue, and he would be quite justified in advising the prohibition of its manufacture and use as a beverage.

Social custom and national habit have so sanctioned the use of this particularly anti-social drug that study, judgment and education have to win their case against a vast inertia.

Is the task harder than teaching the world that it may conquer tuberculosis, or the nations that they cannot live if they waste their baby life?

Is not the goal as splendid and shall our hopes be less than those of the crusaders against tuberculosis and the waste of child life, who have saved more lives annually than the armies are costing this very year in Europe?

It is, as I conceive it, the duty of health departments to teach, teach, teach, persuade, demonstrate, exhibit, exhort, prove that alcohol as a beverage, or in patent medicines is a menace to personal and community health, is a common source of sickness and death, is blocking the path of preventive medicine and is a danger to the physical and social development of the nation.

The Mayor of the City of New York has indicated his approval of the methods of the Department which have been used in combating insanitary conditions or harmful practices in the City of New York, and his annual address on May 2nd he spoke as follows:

"The basis of efficient public health work is public health education. As you are aware, the Department of Health is now, not only through the public press and special bulletins but with coöperation of churches, local civic and other community organizations, carrying on day by day helpful educational work in public and personal hygiene. In this work the Department is not undertaking a crusade against the personal habits of the people of the City, but is calling attention in popular form to scientifically established facts which affect community health and personal efficiency."

Dr. Abbott of Waverley, Massachusetts, a recognized authority in insanity, has recently stated in the BOSTON MEDICAL AND SURGICAL JOURNAL in an article on "Preventable Forms of Mental Diseases," that the most important of the toxic psychoses and brain diseases are the alcoholic.

"Alcohol insanity is a wholly preventable psychosis. One eighth of all admissions to hospitals for insane are due directly to this cause, and an indefinite number of other psychoses, of which alcohol is an important contributing factor." "Movements which seek to educate the public as to exact facts, without prejudice, exaggeration, or sentiment, are the best." "An intelligent and educated public sentiment will support restrictive measures aimed at wholesale protection against evils of alcohol, by rigidly restricting the sale of that which causes them." "If everyone knew what the effects of alcohol really are, its internal use would almost be limited to the prescriptions of physicians."

Within the limits of this brief presentation it is impossible to avail myself of the mass of reliable and important contributions to the social and medical aspects of the use of alcohol. The employers of labor, the teachers of industrial efficiency, the workers among the poor, the physicians in Health Departments and in private practice very generally agree that alcohol causes a large amount of preventable disease, accident and disability, and that its use should be discontinued.

In closing I can but repeat my conviction that it is the duty of Health Departments to inaugurate and carry on by all available means, persistent campaigns of education, to the end that the community, which it is called upon to protect, may be in a position to judge for itself as an organized social group and as independent members, whether they are willing to ignore their own interest, their safety and their health by permitting the continued unlimited manufacture and sale of alcohol.

I venture to predict that no advance in the control of preventable disease of bacterial or infectious origin in the future, could accomplish such reduction of the morbidity and mortality of the community, as would undoubtedly follow the elimination of alcohol as a beverage.

Original Articles.

X-RAY FOLLOW-UP REPORT OF SEVENTEEN CASES OF PYLORECTOMY FOR ULCER.

BY JOHN H. LINDSEY, M.D., FALL RIVER, MASS.,

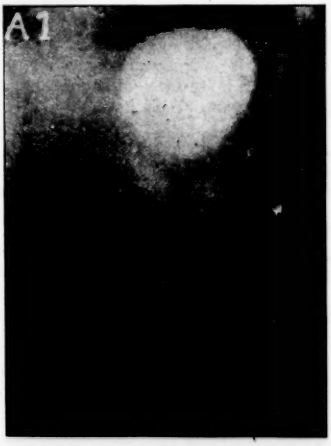
Roentgenologist, The Truesdale Clinic.

INFERENCES often are inconclusive when drawn from the condition of patients at the time of an early post-operative discharge from the hospital. The importance is realized of observing patients for a long time after operation in order to determine the permanence of an improvement or apparent cure.

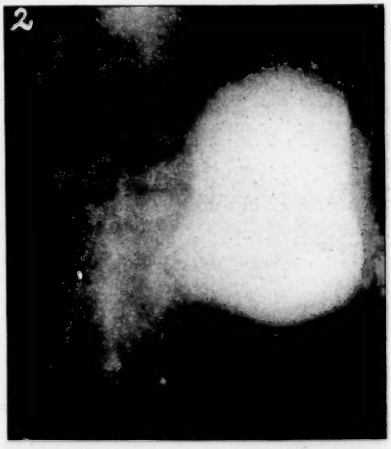
Reproductions are presented herewith of gastric roentgenograms made at varying periods after pylorectomy for ulcer. These plates are believed to have intrinsic interest and also to be of especial importance as representing an x-ray follow-up of patients for long periods after operation.

Nineteen cases are included in this report with roentgenographic study of seventeen. This series of operations of pylorectomy for ulcer is taken from the Truesdale Clinic. The first seven cases were reported two years ago by Dr. P. E. Truesdale (BOSTON MEDICAL AND SURGICAL JOURNAL Vol. clxxi, No. 4, pp. 151-156, July 23, 1914). The case listed here as A1 was also reported at that time as No. 8. Cases No.8 and No. 11 of this series are not represented in this list of roentgenograms. Case No. 8, Mrs. M. C., was not found at her former residence and could not be traced. Case No. 11, Mr. J. M. B., lives in Ohio. He was forty years of age at the time of his pylorectomy. He has an interesting surgical history. In 1907 an operation was performed at Columbus, Ohio, for an acute perforating ulcer of the duodenum. The perforation was sutured. Seven or eight months later a gastro-enterostomy was done. In 1910, he was operated upon for hernia in the scar. The appendix was removed at that time. Pylorectomy was done at the Truesdale Hospital on Feb. 20, 1915. The latest report from this patient stated him to be in good condition.

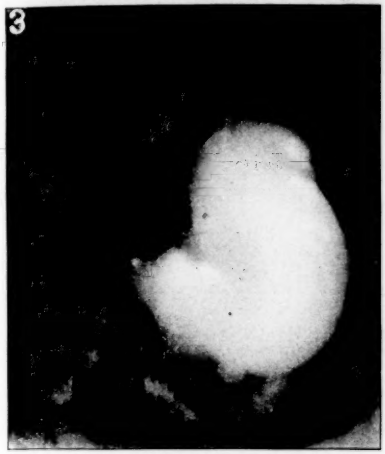
CASE NO. 1. MR. J. S.
Referred by Dr. G. C. Parlow. Gastroenterostomy, Jan. 17, 1908; pylorectomy, Jan. 28, 1908; age at operation, 43; x-ray, Nov. 14, 1915; time since operation, 7 yr. 9 mo. 17 d.



CASE NO. A1. MR. J. G. C.
Pylorectomy, Dec. 5, 1913; age at operation, 41; x-ray, Aug. 27, 1916; time since operation, 2 yr. 8 mo. 22 d.

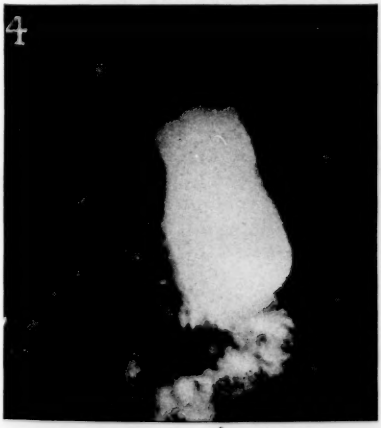


CASE NO. 2. MR. G. C.
Referred by Dr. W. G. Turner. Pylorectomy, Sept. 23, 1910; age at operation, 57; x-ray, Aug. 11, 1916; time since operation, 5 yr. 10 mo. 19 d.

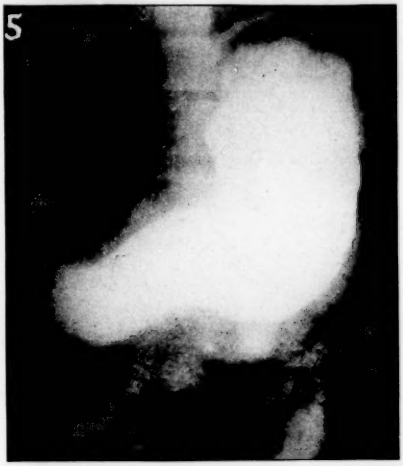


CASE No. 3. MRS. C. E. T.
Referred by Dr. C. A. Briggs; pylorectomy, Nov. 22, 1911; age at operation, 65; x-ray, Aug. 4, 1916; time since operation, 4 yr. 8 mo. 13 d.

While it is difficult to standardize conditions at repeated gastric x-ray examinations, there is *prima facie* evidence in this series of plates that the stomach, after pylorectomy, tends to enlarge or dilate and thus compensates for the part removed at operation. In some cases, where a wide resection has been performed, the stomach does not seem to have much opportunity or occasion to dilate. In Case No. 13, Plate C, for example, a very rapid emptying of the stomach is shown. This plate was



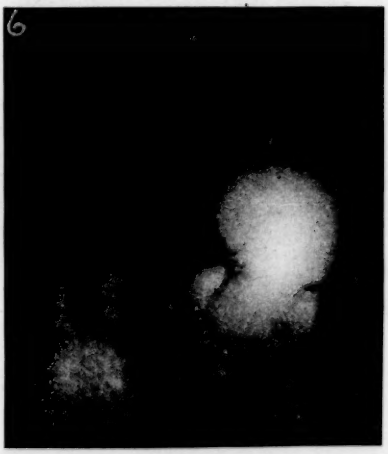
CASE No. 4. MRS. M. E. M.
Referred by Dr. G. H. Hicks; pylorectomy, May 4, 1912; age at operation, 60; x-ray, Aug. 15, 1916; time since operation, 4 yr. 3 mo. 11 d.



CASE No. 5. MR. H. D. Y.
Referred by Dr. G. G. Parlow. Pylorectomy, Sept. 3, 1913; age at operation, 30; x-ray, July 13, 1916; time since operation, 2 yr. 10 mo. 10 d.

taken soon after the administration of the barium-buttermilk. The stomach in this case acts very much like a funnel which merely directs the liquid meal into the intestine. The meal does not stay in the stomach long enough to produce a tension which would cause dilatation. The stomach in Case No. 15 also empties rapidly.

From the clinical information given the roentgenologist, all of these patients, with the ex-

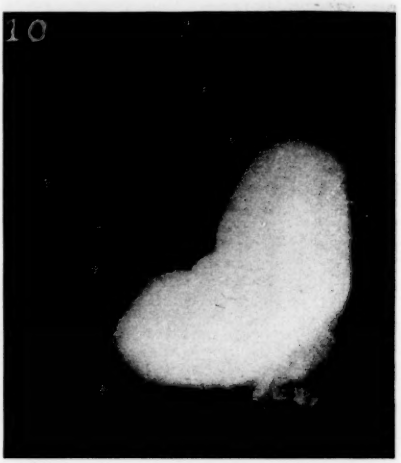


CASE No. 6. MR. B. M.
Pylorectomy, Sept. 8, 1913; age at operation, 48; x-ray, July 27, 1916; time since operation, 2 yr. 10. mo. 19 d.

CASE NO. 7. MR. J. F. P.

Pylorectomy, Jan. 1, 1914; age at operation, 57; x-ray, Aug. 24, 1916; time since operation, 2 yr. 7 mo. 23 d.

ception of No. 2 and No. 10, seemed in good condition. No. 2 has returned recently, exhibiting an inoperable malignant growth of the omentum, with some involvement of the stomach. No gastric malignancy was observed in the antero-posterior plate taken in August for this series. A plate taken recently in an oblique position shows a small gastric defect. No. 10 reported improvement after the operation but



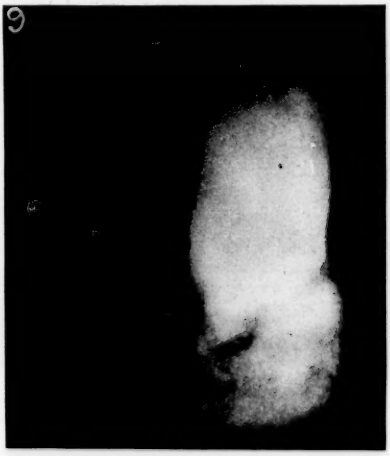
CASE NO. 10. MR. C. E. H.

Referred by Dr. E. F. Curry. Pylorectomy, Jan. 25, 1915; age at operation, 36; x-ray, Aug. 17, 1916; time since operation 1 yr. 6 mo. 23 d.

that for some time he had been having considerable discomfort and had been losing weight.

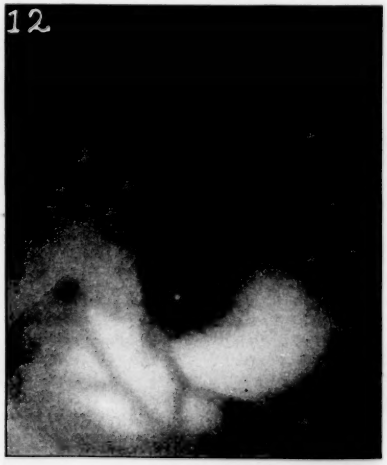
Case No. 4 is of especial interest in view of her age and the fact that she is reported recently to have had a prolonged attack of pneumonia.

Case No. 5 entered the hospital for pyloric obstruction. While in the hospital, tubercle



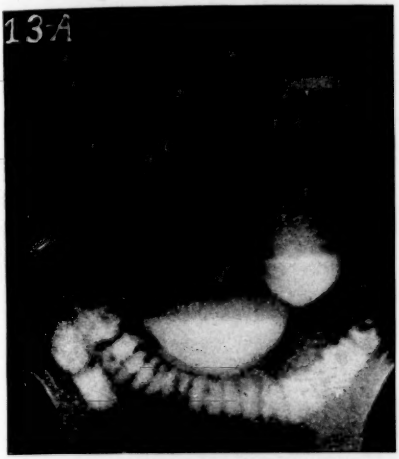
CASE NO. 9. MRS. A. A.

Referred by Dr. J. H. Gifford; pylorectomy, Oct. 2, 1914; age at operation, 54; x-ray, April 5, 1916; time since operation, 1 yr. 6 mo. 3 d.



CASE NO. 12. MR. H. B.

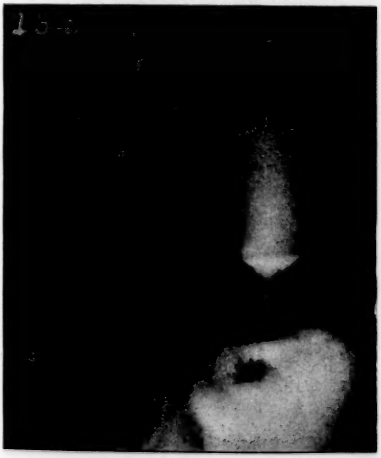
Gastroenterostomy, Nov. 13, 1911; pylorectomy, March 6, 1915; age at pylorectomy, 58; x-ray, Jan. 6, 1916; time since operation, 10 mo.



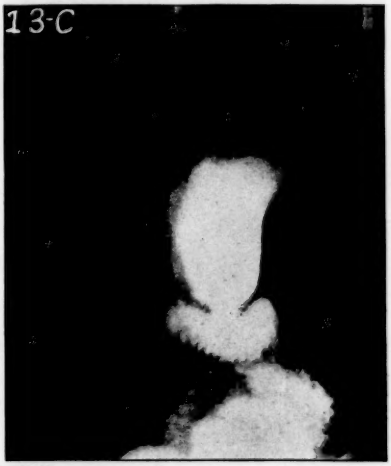
Case No. 13, Plate B. Mrs. M. C. B.
X-ray Feb. 26, 1915. Plate taken before operation shows hour-glass stomach.

bacilli were found in the sputum. Later he had an acute exacerbation of his tuberculosis, and suffered from haemoptysis. His stomach however, has withstood the strain. The tuberculous process remains quiescent.

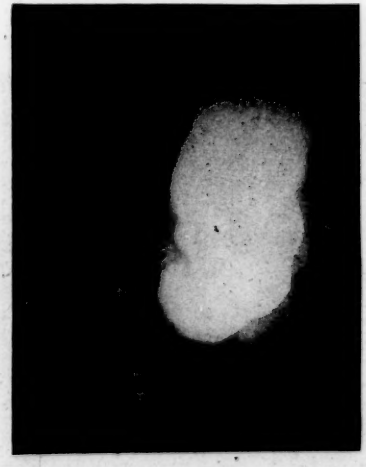
In general, the efficient manner in which these stomachs have performed their function, at such long periods after operation, testifies to the essential conservatism of an apparently radical operation.



Case No. 13, Plate B. Mrs. M. C. B.
Pylorectomy, April 21, 1915; age at operation, 53; x-ray, Oct. 21, 1915; time since operation, 6 mo.



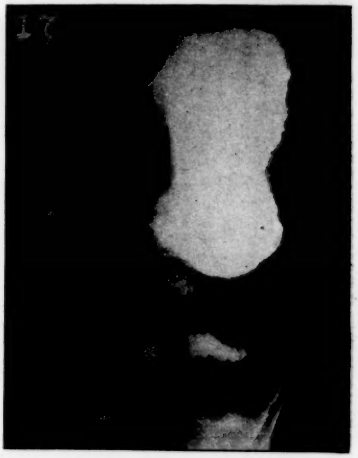
Case No. 13. Plate C. Mrs. M. C. B.
Pylorectomy, April 21, 1915; age at operation, 53; x-ray, Aug. 18, 1916, time since operation, 1 yr. 3 mo. 28 d.



Case No. 14, Miss K. C.
Pylorectomy, May 10, 1915; age at operation, 27; x-ray, Aug. 17, 1916; interval, 1 yr. 3 mo. 7 d.

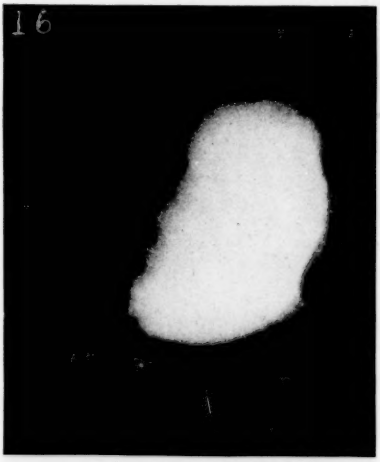
CASE NO. 15. MISS R. B.

Referred by Dr. M. A. Cummings. Pylorectomy, July 12, 1915; age at operation, 39; x-ray, Aug. 21, 1916; interval, 1 yr. 1 mo. 9 d.



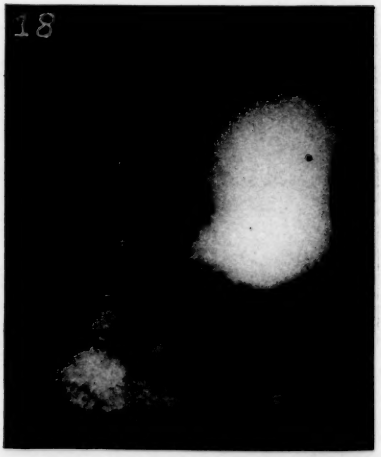
CASE NO. 17, MR. B. C.

Pylorectomy, Nov. 2, 1915; age at operation, 40; x-ray, Aug. 18, 1916; time since operation, 9 mo. 16 d.



CASE NO. 16. MR. J. C.

Referred by Dr. W. E. Turner. Pylorectomy, Aug. 2, 1915; age at operation, 52; x-ray, Aug. 17, 1916; interval, 1 yr. 15 d.



CASE NO. 18. MR. T. B.

Pylorectomy, Dec. 4, 1915; age at operation, 48; x-ray, June 10, 1916; time since operation, 6 mo. 6 d.

OBSTETRIC ADVANCES, INCLUDING ANESTHESIA, THE USE AND ABUSE OF PITUITRIN. EXTRA-PERITONEAL CAESAREAN SECTION. PUBIOTOMY, AND THE SIGNIFICANCE OF FUNNEL PELVIS.*

BY JOHN OSBORN POLAK, M.Sc., M.D., F.A.C.S., BROOKLYN, N. Y.,

Professor of Obstetrics and Gynecology, Long Island College Hospital.

AT the request of your secretary, I am going to call your attention to a few of the advances which have been made in the Obstetric Art. He has asked me to speak to you particularly on the subject of anesthesia in labor, and to touch on that part of the subject which has caused so much newspaper notoriety, known as "Twilight Sleep."

First of all, we must understand and admit that the influences of civilization have changed the muscular force or "horse-power" of many of our women—I think you will all admit this fact. Consequently, there has been a demand for the relief of pain in labor. Our friends in Boston have popularized the delivery by Caesarean and various other operative means, in the highly nervous and the physically unfit woman. There is in this class of women a definite shock attending labor—so severe in some, leaving them so prostrated, that you will find a large number of society women who are unwilling to undergo the strain of a subsequent labor. This shock is an absolute entity. Sometimes it is extremely profound, and after what Crile has taught us in his anoci-association, and Koenig and Gauss have brought out in their method of amnesia in labor (which is but an obstetric application along the lines which Crile has made so much of), just as he diminishes his shock by a pre-anesthetic dose of morphine, so may we reduce the shock in labor by relief of pain during the first and second stages.

Any one who has had much obstetric experience knows what happens immediately after delivery:—there is a sudden drop of the pulse-rate because of the lowered abdominal tension and the sudden dilation of the abdominal veins, the quality of the pulse and blood pressure is suddenly lowered, and we have a post-partum shock—the intensity of which depends upon the length of labor and the individual resistance. In our civilized women, who marry at a later age than their mothers and grandmothers, there is a rigidity of the cervix which tends to prevent the easy dilatation of the cervical ring or, at least, takes more time to accomplish it; and this means pain—and pain is work—and work exhausts. They are not good patients in standing pain; and we know that complete dilation of the cervix is absolutely necessary to permit of the natural delivery of any child. It takes time and the natural factors—pains and a bag of waters—to dilate the cervix. There are a number of cervices which dilate to a certain point and quit—yet the labor pains go on; but the woman makes no advance because the pains are ineffectual, the muscle is tired, the pain has no "punch." If a single dose of morphine is given to this woman and she gets a few hours' rest, she starts in with renewed vigor, and the cervix is dilated rapidly.

These facts cannot be contradicted by anyone who has had any obstetric experience. Consequently, we have adopted and employed with considerable success morphine and scopolamin in labor. The present status of anesthesia is about this: During the first stage we have two drugs which definitely aid dilation, relieve muscular spasm and diminish the shock of the first stage of labor—these are morphine and chloral. We can give moderate doses of morphine, for its analgesic effect, during the first stage, and it has no influence whatsoever on the child. While morphine can be given hypodermically, chloral cannot, and is likely to be rejected by the stomach—hence, the more general employment of the former. Then came up the question of whether it was not an advantage to cut off the nerve trunks and prevent the brain cells from participation in the mental strain of labor. To accomplish this scopolamin was introduced, and loss of memory or amnesia obtained —the so-called "Twilight Sleep." With the proper administration of morphine and scopolamin we produce an amnesia or loss of memory to the occurrence of pain, without interference with the force of the involuntary muscular contractions of the uterus. We are able in this way to carry women for 10, 15 or 30 hours in the first stage of labor, and secure complete dilatation of cervix, without the woman having the strain or recollection of her suffering, and without hearing the constant request: "Doctor, you will have to do something for me—I can't stand it." This amnesia takes away the element of shock. It is safe in the first stage to relieve pain with morphine and scopolamin or choral, when the uterine contractions are regular or excessive and the relations between head and pelvis are known.

In the second stage, morphine and scopolamin have a *definitely injurious effect*, as they prolong the second stage; and, by prolonging this stage, subject the child to a longer period of continued pounding and uterine compression, which interferes with the feto-placental circulation. As soon as the head passes through the cervix, if the membranes have been ruptured for any length of time, the uterine walls are more or less tightly moulded on the child, interfering more and more, as labor goes on, with the fetal-circulation. If you will take the trouble to listen to the fetal heart during a contraction of the uterus when the woman is in the

* Address on Obstetrics before the New Hampshire State Medical Society, March 16, 1916.

second stage, you will notice the extreme flights of the fetal pulse, even when the head is making rapid progress through the pelvis. Add to this the slow-moulding through a tight pelvis, and the toxic influences of the drugs, and such interference with the feto-placental circulation that we get oligopnoea and cyanosis in the child —which has been the criticism of the opponents of this method.

Our experience is based on 550 cases conducted by my associates and myself, and we have had four dead babies in the series of 550 selected cases. They were not consecutive cases, though I believe that it is a lower fetal mortality than you could get by any other method of conduct. The amnesia has been conducted by two men who are paid residents in the Department of Obstetrics and Gynecology, and not left to internes. These men have been with me two to four years, and are trained obstetricians. One baby died two days after birth. On autopsy we found hemorrhage into both supra-renals. This baby was oligopnoeic on delivery. Another case, which showed a diaphragmatic hernia with transposition of viscera, died at the end of four days. The third fatality occurred within an hour after the delivery. On autopsy we found atelectasis of both lungs. The fourth case was one of cord three times about the neck —which was born dead. These four cases, all of which were autopsied and all of which I believe died of causes independent of morphia, are the best evidence of what proper organization can do in obstetrics. We use morphine and scopolamin in our border-line contractions of the pelvis, in order that the woman may have complete dilatation of the cervix, so that she may be given her test labor after dilatation has been accomplished. Eighty per cent. of spontaneous deliveries in border-line pelves is a record which should endorse analgesia in labor. In heart cases—and we have had nine in which decompensation occurred either immediately before labor or during the first stages—it has been wonderful to note the action of the heart under the influence of morphine and scopolamin, where apprehension forms such a great factor. Heart cases, as you know, do not bear physical pain or muscular strain without serious effects. By the relief of this apprehension and consciousness of pain, the involuntary muscles have been competent to obtain complete dilatation, when the physical exertion of the second stage was avoided by delivery with forceps without the use of further anesthetic. While it is our habit to have the baby's heart listened to and the rate recorded every fifteen minutes during the later stages of labor, it is not because of the effect of the drug, but simply that we have found that we can save more babies by noting the changes occurring in rate, rhythm and bruit of the fetal pulse. In Friburg they began the frequent auscultation because they were afraid of the drug. Then they found there was no effect from the drug in the first stage—only in the second stage was there danger. They then found they were able to detect other things—as coils of cord about the neck, short cord, etc.—by recognizing the fetal souffle.

While my resident was spending the summer with Williams, in Baltimore, he was asked to conduct thirty cases for him. In twenty-two cases the baby cried spontaneously on birth. In eight cases, when he listened to the fetal heart, there was a definite funic souffle. Each one of these cases was mildly asphyxiated and had the cord one or more times about the neck—showing you that it was possible for him to make a diagnosis of the cord about the neck by the souffle, and the variations in the fetal pulse during the pain.

We still plug the ears with cotton—as we cannot keep a hospital as quiet as we can a private house—and we bandage the eyes. We then sit down alongside of the patient and talk to her, just as though we were going to administer an anesthetic, and give her the first dose of morphine and scopolamin, using 1-4 or 1-6 of a grain of morphine and 1-130 grain of scopolamin as the initial dose, giving it hypodermically; and we tell her she will have relief from pain very shortly—repeating this in a monotone. You all know the influence of the personal element in giving ether. At the end of an hour, she is given a second dose of scopolamin—1-130 of a grain. By that time she is amnesic, the pains recur regularly and disturb her momentarily, but she relapses into her doze; and if awakened, she will not remember the number of needles she has had. We carry her along in her amnesia with 1-400 of a grain, repeated sometimes every half hour or two hours until dilatation of the cervix is accomplished.

I have tried to give you the sum total of what was the conclusion of the discussion at the American Gynecological Society last week, *i.e.* that morphine and scopolamin is the method of choice in the first stage; and gas-oxygen or ether-oxygen is the method for the second stage. Each has its place—neither can do the work of the other with safety. Women have a right to a painless labor, if they can have it; and if you are willing to spend the time and they are willing to pay the price, they can have it.

PITUITRIN.

The use of pituitary extract, under one of the many trade-names, has become so common by the general practitioner, and the accidents from its use are so serious when the indications are misjudged, that it is time to sound a note of warning as to its danger.

In labor its indications are clear-cut. It may be used in *inertia-uteri*, to hasten delivery, when the cervix is fully dilated or nearly so, and the head is in the pelvis at or just above the ischial spines or on the pelvic floor, and the outlet diameters are ample to allow the exit of the

head. In accidental hemorrhage (*abruptio placentae*) when the head is engaged—after rupture of the membranes—small doses may contract the uterus on the fetal mass sufficiently for it to check hemorrhage from the placental site. In the third stage, after delivery of the placenta, to cause retraction and contraction of the atonic uterus—here, when combined with ergot, its effect is more lasting.

In Caesarean section before the incision is made into the uterus, an ampoule of pituitrin will minimize the amount of hemorrhage. If given before the operation is begun, the uterine spasm produced may be so great as to interfere with proper suturing. If an ampoule or two of pituitrin is given just before emptying the uterus of an abortion, the bleeding will be negligible and the uterus more easily emptied, because of the muscular contraction of the body produced. While it may have other indications in the hands of the enthusiast, obstetricians today are wary of its powers, and are using it in 1-3 and 1-2 ampoule doses, and repeating the dose, rather than employ it in large doses as recommended.

Its ill effects are the result of its spasmodic tetanic action on the uterus, and its indiscriminate use. Rupture of the uterus, extensive lacerations of the cervix and pelvic floor, and death of the fetus from interference with the feto-placental circulation, are admitted dangers. Rupture of the uterus comes from its use in the presence of pelvic or fetal dystocia or rigid cervix, when the presenting part is engaged and a misfit.

Lacerations from the precipitate labor induced by its use before the cervix is fully dilated. Fetal death from its use early in labor, where it is possible to loosen the placenta from its site and so produce accidental hemorrhage. We can never know in which case it will produce tetanic spasm of the uterus, hence, chloroform should always be at hand to relax the spasm, or the fetus may be asphyxiated in the second stage by the spasm of the uterus cutting out the placental circulation.

Use it only in small doses in the second stage, where there is no disproportion, or in the third stage, when the placenta has been delivered, and you will have no ill effects.

EXTRA-PERITONEAL CAESAREAN SECTION.

My next reference will be to extra-peritoneal Caesarean Section. All of you are doing Caesarean sections from time to time (and I am convinced that obstetrics today, even in the country, is past the stage where you engage to take the case and give the patient no antepartum examination) and when labor occurs, if the baby does not come through, you try *this* and *that* to solve the problem. We look upon the obstetric art as an exact science, based on exact indications and limitations—not as the man in Jersey, some few months ago, who engaged to deliver a woman, a primipara, who had gone several weeks overtime with an immense baby. She fell into labor, and the doctor wanted to hurry labor, so he gave her a hypo. of pituitrin. This didn't help her—so he gave her another dose; then he found the cervix was still but slightly dilated, so he took her to a hospital, anesthetized her and did a version. In attempting the extraction through a flat pelvis, the shoulders and after-coming head got caught; so he turned her around and did a Caesarean. The baby was dead and the woman had sepsis. This is not obstetrics—it is licensed butchery. Obstetrics is knowing what you are going to meet, and preparing yourself to meet it.

Extra-peritoneal section was first introduced by Joerg, in 1809. Thomas, of New York, in 1870 modified the operation by making an incision parallel and just above Poupart's ligament, through which he pushed back the parietal peritoneum, and separated the bladder by pushing it to one side until the cervix and lower segment were exposed—this was incised and the baby withdrawn through this circuitous route. A large mortality from sepsis discouraged further attempts, until Frank revived the operation in 1906. Frank claimed that the modern Caesarean operation presented some unsurmountable objections in cases which had been handled:

First: That there was danger in soiling the peritoneum after labor had been long in progress and frequent examinations had been made.

Second: That infection of the scar in the upper part of the uterus weakened the scar and subjected the woman to the danger of subsequent rupture.

Third: Intestinal complications were common.

Fourth: That adhesions always occurred particularly if there was infection.

Peterson, Williams and Davis advise removal of the uterus, if the woman is suspected of being infected.

Frank claims the extra peritoneal section meets these objections. We have now done eleven without fatality. Hirst has done over 40. We have both adopted the trans-peritoneal procedure or the technic of Viet-Fromme.

With the woman in a high Trendelenberg to favor the lower segment being drawn upward, an incision is made in the median line from the pubes to below the umbilicus; the parietal-peritoneum opened; and the bladder reflexion exposed. This is nicked at the utero-vesical junction, and the bladder and the visceral peritoneum separated from the front of the uterus with Mayo scissors, exposing the lower uterine segment. The edges of the opening in the visceral peritoneum, including the bladder edge, are sewn to the opening in the parietal peritoneum with interrupted sutures of catgut, making the exposed segment of the uterine wall entirely extra-peritoneal after protecting the

edges of the wound with sponges; the lower segment is incised and the child and placenta delivered without soiling the peritoneal cavity—a large sponge, soaked in iodin, is now introduced into the uterus and the end pushed through the cervix, to be removed at the conclusion of the operation. The wound in the uterus is now closed with interrupted iodized catgut, and the edges of the two layers of peritoneum sewn together. The abdominal wound may be closed in layers or with through-and-through sutures of silkworm-gut. If infection occurs, it is extra-peritoneal. We are sure many women can be saved from hysterectomy by perfecting this technic. One woman in nine has a contracted pelvis, and forty-three per cent. of those with contraction have the narrowing at the outlet. Funnel pelvis, therefore, is a relatively frequent cause of outlet dystocia, of the extensive laceration of the soft parts of the posterior segment, and of the persistence of occipito posterior positions on the pelvic floor. These are clinical facts. Hence, every woman should have her *outlet* measurements taken. The bisischial diameter, the distance between the ischial tuberosities, taken with the patient in the exaggerated lithotomy position, should measure more than 8 c.m. to allow safe exit for the child. A short bisischial, with narrow pubic arch, forces the head backward as it pivots out of the pelvis. This explains the large number of sphincter tears in women with funnel pelves. A short transverse at the outlet must have a compensating posterior sagittal (the distance from the center of the bisischial line to the tip of the coccyx) to allow delivery to take place.

Outlet contraction is solved by posture and pubiotomy. Posture—by having the patient lie in an exaggerated Sim's position, the posterior sagittal diameter is actually lengthened. Subcutaneous section of the pubic bone just inside of the pubic spine is not a formidable operation when done in properly selected cases. It is particularly indicated in outlet dystocia due to funnel pelvis, and in minor contractions of the pelvis, where the shortening is anterior-posterior and the conjugate vera not less than 7.5 c.m. Its successful application presupposes full dilatation of the woman's soft parts; hence it is never an elective operation but a procedure to be employed after a test of labor has been given.

Technic: after the vulva and inner surfaces of the thighs and lower abdomen have been surgically prepared and the woman anesthetized and in the lithotomy position, a small skin incision is made just over the pubic spine; through this a Döederlien needle is passed, which penetrates the fascia and is pushed along the posterior surface of the pubis, closely hugging the bone just internal to the line of the pubic spine, guided by the finger in the vagina until the blunt tip emerges under the skin in the labium majus; the skin is nicked over the tip and the needle pushed through. It is then threaded with a Gigli saw, and redrawn through the track it has made. When the handles are attached to the saw, the bone is sawn through and the saw removed. The venous hemorrhage from the wound in the labium majus is controlled by packing the incision with gauze. The skin wound sealed with a collodion dressing. The child is then delivered spontaneously, or after pushing the head into the pelvis, the forceps is applied and extraction effected, while the assistants on either side hold the pelvis steady and prevent too wide a separation of the pubic bone. Soft-part lacerations are immediately repaired, and the operation is completed by encircling the entire pelvis with a six-inch wide belt of Z. O. plaster. The patient is then placed in bed and encouraged to lie upon her sides as much as possible; on the eighth day the plaster support is reinforced and she is allowed to sit up and walk on the tenth. My associate, Dr. Beach, has proven that in the standing position the pubic bones are brought in closest apposition, while the separation is greatest while lying on the back, unless the patient be in a trough-bed.

Our results and those of Williams have been so satisfactory, that I cannot but feel that many children may be saved by hebosteotomy, who would otherwise be sacrificed to perforation.

THE CO-EFFICIENT OF SAFETY IN SURGICAL OPERATIONS.*

By Herbert L. Smith, M.D., Nashua, N.H.

At the risk of being unpopular, I shall, during the few minutes alloted me, neither enumerate unusual cases nor describe novelties in technic. Surgical literature has been and, I presume, always will be crowded with such details, and that I take to be their proper place. Instead of personal experiences, therefore, I shall ask you to follow with me certain lines of thought and study which have recently occupied my attention.

Let me say at once that in what I shall have to present there will be nothing new or brilliant; very likely it may not be even interesting. To the average workaday man history is, I believe, a rather dry subject. We are so wrapped up in the task of the minute that we have little time or inclination to correlate our problems with those of earlier ages and previous workers in our special line of endeavor. Yet, such study, you will agree, makes for breadth of view, and therefore, increased efficiency; and in no sphere of activity is this more true than in our own profession, from the very fact, if for no other reason, that the greater part of the immense advance made in surgery during the

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past 200,—yes, 2000,—years, has taken place within the memory of those now living. I make no apology, therefore, for asking you to visualize with me the past and present trend of surgical progress, its aims, its past methods, its present tendencies and the lines along which future advancement seems most assured.

The aim of surgery has always been threefold,—to save life, to restore function and to diminish suffering. In the present day of universal energetic activity, perhaps we should change the order and say that that surgeon best serves his generation who is most successful in prolonging human activity, relieving human suffering and saving life. Mere living has few attractions to the man who must suffer and cannot work.

"Safety First" has become the watchword of the day—at least in the pursuits of peace. The factor of safety lies at the foundation of every form of constructive activity, whether it be in the building of a bridge, the management of a railway system or the removal of an exophthalmic goitre. Those who deal with inert materials can compute tensile strength within the fraction of a grain; those who manage a mill must in addition take into account the fallibility of human brains; but we must weigh with all the means in our power the varying strength and weakness of vital tissues for which there is no foot rule, no scale, no invariable test. How have we met this problem in the past? How can we arrive at more accurate results with a consequent lessening of risk in the future?

From the beginning of time up to the present day there have been two, and only two, epoch-making discoveries which have contributed to the advancement of surgery. I refer, of course, to the discovery of anaesthesia and the recognition of the cause of infections. So far as we can see there is no likelihood that any third advance at all comparable to these two will come to our aid in the future. The varying factors of safety in surgical work have been distinctly and vastly different before and after each of these revolutionary discoveries. Let us examine with some care into the elements of which they consist in each of the periods into which surgical history naturally divides itself.

In the first two periods, which are (a) the pre-anaesthetic, which includes the whole period of surgery up to the discovery of ether, and (b) the period intervening between Morton's day and that of Lister, the whole trend of surgical endeavor was to prepare the operator for the patient. Those were the days of surgical boldness and of a sure and ready knowledge of gross anatomy and of rapid technique. It was the day of surgical fireworks in the operating room, but, alas, of long drawn out suffering, gangrene and sepsis in the hospital ward. Anasthesia robbed the operation of its horrors, but the suffering from secondary complications had still to be endured.

With the third era of antisepsis and asepsis came the more complete recognition of the patient as an element to be reckoned with. The operator was no less trained, but on different lines. He need no longer measure his ability by the number of seconds required to do a Pirogoff operation, or his skill in tying the subclavian, but his technique had become more exact, if less spectacular. On the other hand, the patient was now being prepared for the operator, and not merely the operator for the patient.

The first, natural, and most striking result of the immunity from secondary catastrophes obtained through the beneficial influence of ether and asepsis was the great increase in the number and variety of human ailments which were transferred from the field of the internist to that of the surgeon. Whereas, in the early days, one could count the names of the great surgeons on his finger tips, they now were numbered by the hundreds and thousands. New operations, and newer modifications of new operations, and improvements on the latest modifications were chronicled month by month, day by day and almost minute by minute. At first a sort of chaos reigned; then order began to appear until, as in all such experiences with newly acquired knowledge, we have now come to a period of something akin to standardization. The general principles upon which any surgical intervention is to be conducted are now generally agreed upon. The work of two operators on opposite sides of the globe, under similar conditions, now differs only in unimportant details.

The immense number of surgical journals, the frequent visits of surgeons to hospital centers, the natural and proper desire of operators to make common property of any and every procedure which they may have found of value, have brought about a consensus of technique which is now universally accepted.

The medical student, after his four years of study and his hospital service, boldly (sometimes, alas, too boldly) grasps his scalpel and, without a quiver, undertakes delicate major operations which were undreamed of by the man who graduated twenty-five or thirty years ago; and this is so commonplace, so much a matter of daily occurrence, that I doubt whether we can take it in, whether we see the wonder of it. You younger men, I am quite sure, will never be able to appreciate it at its full value. Men of my own age, and those older, will never forget the nerve racking strain of even the earlier antiseptic days when the operating room was thick with the mist of carbolic spray, and it was still an awful thing to watch the occasional operation for ovarian tumor. Sometimes I think good might come if some of the terrible lessons of those days could be experienced by the young operator of today, who boldly rushes in where the gray haired veteran has learned to ponder long before he enters.

But if surgical technique has become perfected and the principles underlying surgical intervention so well defined, in what direction are we to look for progress? Wherein lies the advancement of the future? How can we increase still further the co-efficient of safety for our operations?

Obviously, we cannot in the future, as in the past, cut in half at a single stroke our death rate for a given operation. The surgeon deems it worthy of immediate record and publication if a new procedure is found which decreases his mortality by a fraction of 1%. It is this fact more than any other, which has been impressed upon me by a review of surgical progress during the past fifty years, and I believe it will be only after, and because of, a thorough appreciation on our parts of this vital fact, that we shall in every case that comes under our hand be led to seek for and apply to that individual case, all the possible, even minutest, factors which may, combined, tend to augment his factor of safety.

With the rapid increase of operable conditions and the general willingness on the part of patients to accept the verdict of a surgeon that an operation is necessary, I believe there is a risk that we shall run into a very grave danger. Surgery is becoming routine. A man shows the signs of an inflamed appendix. We say, "Have it out." Well and good, all will agree. The only prerequisite I demand is that we be sure, or reasonably sure, that it is his appendix which is causing the trouble. Again, we find that a woman has fibroids. Again, we say, or, at least I believe we are prone to say, "Submit to a hysterectomy." But should we be so sure? I, personally, have watched through a series of years many women who have carried fibroids without impairment of either health or comfort. Would all of these individuals have survived an operation and would they have been in as good health afterwards if they had undergone an operation? We cannot honestly make any such statement.

While it is a great aid to the surgeon that the laity have become so habituated to the word "operation" that they no longer hold back as formerly, and even frequently make their own diagnosis of, say, appendicitis and come to us requesting operation, yet this very willingness sometimes makes it difficult to be entirely fair with those who have some non-malignant trouble which *might* be operated upon, but in whom the risk of operation is greater than that of non-intervention. I have more than once, and sometimes at the risk of discrediting physicians who have sent cases for consultation, and sometimes, I am frank to say, with the result of alienating the good will of such colleagues, advised against any operative intervention. Of course, there are here, as well as elsewhere, tactful ways of getting around the difficulty, and it should be said to the credit of the profession that few, if any of them, will say that any surgeon has the moral right to permit himself to be forced or over persuaded into performing any operation which he considers unnecessary or inexpedient. Our great hearted Nestor in the profession, Dr. Maurice Richardson, used to say that he would not perform any operation until he had satisfied himself as to the diagnosis and the necessity of interfering.

Certainly, the members of our profession are men of conscience, and whatever may be said in the non-medical press by one of its literary members in the way of casting slurs upon our disinterested honesty when a fee is at stake, I still believe there are few in our ranks who are influenced one iota by anything save the best interests of the patient.

What then are the elements of the factor of safety which we are bound to consider in our efforts to reduce our mortality and post-operative disability to the irreducible minimum? Obviously I can refer to but a few. I shall, however, have accomplished my aim if I am successful in focusing my own thought and yours on the fact that in any surgical case susceptible to an operation it is not enough merely to apply the *general* principles of our art. Each individual has the right to expect that we shall apply to his case any and all facts, however minute, which have a bearing on the necessity of operation and employ every expedient, of whatever nature, which may improve his chances for recovery.

The few points relative to increasing the co-efficient of safety which I shall have the time to suggest for your consideration will be touched upon very briefly under several heads.

1. *The Operator.* It should go without saying that no surgeon will undertake operations which he knows he is not fitted to perform. He should have had abundant opportunity to assist older surgeons in similar cases, or have done them himself under the eye of an experienced man. This seems almost too obvious to require statement, but, having viewed the readiness of the laity to submit to operations, and the apparent ease, as seen from the seats of the operating theatre, with which the hospital surgeon does even difficult manoeuvres, I believe there is no one in this room who will not agree with me that too much emphasis cannot be placed upon this point.

Again, no operator, old or young, should fail to perfect himself in technique by repeated practice outside the operating room. Pigs' intestines are not expensive. The great surgeons of the day do not feel it beneath them to rehearse a new procedure on the cadaver before risking the welfare of trusting patients.

Such obvious requisites as constant study of textbooks on anatomy and operative surgery, and of surgical literature, and periodical visits to large clinics and surgical centers, it seems

hardly necessary to mention except for the fact that many of us forget the counsel of William Mayo, who has stated that every surgeon should spend at least an hour each day in study, and that a two-weeks' vacation should mean twelve hours of extra reading.

2. *Preliminary Care.* I have often thought that too little attention is paid to preoperative treatment. In the average case the patient enters the hospital the day or the evening previous to operation. I am not at all sure that this is best. Of course, in emergency cases, and in certain types of nervous individuals, possibly, a longer delay might not be wise. I am convinced, however, that a few days' rest in bed, either in the hospital or at home, would make for less post-operative discomfort and perhaps in a poor risk turn the balance in the right direction.

We have now a considerable number of two-stage operations. I believe that at least a part of their greater safety is due to the fact of a certain accustoming to the bed, so to speak, which they thus obtain. We all know how successfully Crile "steals away" a goitre from the super-sensitive patient. One such individual, who was in a deplorable condition, I kept in bed several months before the operation, and with the most gratifying results. Elderly men with enlarged prostates, especially those with kidney or bladder complications, I have kept in bed weeks before and weeks after their preliminary drainage, and have found that they have escaped certain dangers and discomforts which have sometimes followed a more precipitate course.

Blood, or at least salt transfusion, should, if possible, be done previous to rather than subsequent to operations. I can recall cases where this should have been done.

Again let me suggest that while delay is often dangerous, too great precipitancy may be equally so. One of my most admired teachers at the Boston City Hospital, Dr. Post, taught me this lesson. As he used to remark, it was oftentimes good surgery to wait a while, and see what nature would do. Any fool can operate, but it may take a very wise, as well as courageous, man to know when to hold his hand.

3. *Anesthetics.* This requires but a word at the present time. Some day, doubtless, we shall have the perfect anesthetic. Perhaps nitrous oxide may come into general use, but as long as we use ether, let us get along with as little of it as we can. Dr. Gay always finished his operations with his patient semi-conscious and moving about. I used to compare his results with those of others who demanded more profound anesthesia, and I believe that his was the safer course.

4. *Operation.* Happy the man and lucky his patients who can operate rapidly and not hurriedly. Happy he whose touch is gentle and who thinks straight when he is at work. The man who fumbles, who handles roughly sensitive internal organs, who wastes time in lost motions, gives himself, and mayhap his patient, away.

The day of small incisions, I believe, has gone. An ample opening gives a better field of vision, minimizes tissue injury and saves time.

5. *Convalescence.* One of the most striking features of operative work, especially abdominal, that has struck me in comparing the results of today with those of fifteen or twenty years ago, is the vast difference in the appearance and behavior of the patient during the post-operative week. I am somewhat at a loss now to explain it. Then it was the rule to have a terrible time of anxiety and constant working over the patient. Now it is the rule to have practically no post-operative trouble. I suppose it is due to the combination of many little improvements in management and technique before and during the operation which has led to this happy result. A portion of it I attribute to the more thorough clearing of the intestinal tract previous to the operation, but it cannot be entirely that, because many emergency operations are done without preliminary evacuation. If it is, as I suppose must be the case, but the natural result of better operative technique and shorter operations, then it is but another proof of my contention which this paper is intended to emphasize, viz., that success in surgery, itself no trifle, depends on the most scrupulous attention to trifling details.

On reviewing what I have written up to this point, I have a notion that it fails to reproduce exactly the picture I had in mind when projecting my paper. I fear you will carry away an impression of platitudes and generalities uttered by one who has already arrived at the age of ultra-conservatism or even old fogyism—the age when mental plasticity begins to give way to fixed ideas, with a resulting inability to distinguish between the radicalism, without which there can be no progress, and the rashness of the incompetent servile imitator, or the impetuosity of the young enthusiast whose ambition is like unto an eighty horsepower twin six racing motor, but whose brake bands need relining, or the rapacity of the occasional (only occasional I am glad to say) man who commercializes his profession. I hope this will not be your conclusion.

While I would have no hesitation in preaching conservatism, since a wise conservatism is, to my mind, the highest evidence of mental sanity, I have felt it proper to point out the dangers of an indiscriminate and unthinking resort to the knife as one of the errors into which we may unwittingly fall, and sometimes to the detriment of our patients and of our own mental poise.

Sir Arbuthnot Lane is a wonderfully magnetic speaker and a master technician, but if we, who are not Arbuthnot Lanes, either in

mentality or dexterity, begin to cut out our patients' colons, something will be pretty apt to happen. Why not wait a bit, meantime relieving urgent symptoms by less radical procedures, and see what the surgical masters will say about it, say three, five or ten years hence? Let us not be lacking in ambition nor yet in courage, but on the other hand, let us not lose our heads!

We of the rank and file will always find an abundant and varied assortment of accepted surgical procedures, sufficient to tax our best endeavors, and, as I have already said, and now repeat with added emphasis, we owe it to our patients, first of all, and to ourselves as well, to study diligently, intensely and eternally, to ponder wisely, unceasingly and honestly, to counsel with each other freely, often and frankly, to give advice in matters of vital moment only after we shall have exhausted all those means of obtaining a just insight into the case which we would demand were we ourselves the patient.

This means hard work, constant vigilance, everlasting study, clear thinking, a trained judgment, absolute honesty, and, not least of all, an unblunted conscience.

But these are, or at least they determine and enable us to augment, the co-efficient of safety.

SOME LIMITATIONS IN RÖNTGEN-RAY EVIDENCE OF GASTRO-INTESTINAL LESIONS.*

BY FRANKLIN W. WHITE, M.D., BOSTON,

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IT is more agreeable to praise than to criticize a new method of physical examination, but every clinical method has its limitations and we must know them.

We all recognize the great value of Röntgen examinations of the gastro-intestinal tract, the devotion of the radiologists, the patient, earnest, brilliant development of the technique, and the personal sacrifices they have made of health and even of life.

I am wholly in sympathy with the development of the method, and, through the kindness of Dr. W. J. Dodd and Dr. G. W. Holmes of the Massachusetts General Hospital, and Dr. Samuel Ellsworth of the Boston City Hospital, have used the fluoroscope and examined plates in hundreds of private and hospital digestive cases in the last two or three years.

So much has been said, however, about the unlimited possibilities of the method that the pendulum is swinging too far in one direction. This new, elaborate (and expensive) examination is altogether mysterious to the layman: he is ready to believe that it will do anything, and many physicians seem ready to follow suit.

The most remarkable claims and statistics are accepted without hesitation. Practically all gallstones can be found and 98-100% duodenal ulcers, the normal appendix is always seen, early cancer can be diagnosed and exploratory laparotomy is a thing of the past.

We must guard against sweeping statements and must not be imposed upon by the fictitious accuracy of any clinical method. A clinician who is familiar with all sides of digestive work, with the Röntgen-ray as well as the laboratory, can best appreciate the value or limitations of any one method of abdominal diagnosis.

In their enthusiasm some radiologists are not critical and use their statistics in a partisan way to prove a point, rather than to search for truth. Isolated facts are not the truth, though they are the elements from which the truth is formed. The best aspect of a truth lies in the *selection* of the facts and the *distribution of emphasis* among the facts.

The new facts found by Röntgen examination are abundant and bewildering and call for new judgment, and bring new sources of error, for example, "ileal stasis," the evidence of adhesions, or "chronic appendix." What importance have they in relation to the symptoms in the case? Shall they be disregarded or operated upon? There is plenty of opportunity here for poor judgment with neglect on the one hand, and unnecessary surgery on the other. There is no question that the interpretation of this data is better in the hands of one who knows all the clinical facts. The clinician must train himself to interpret plate and screen findings.

The different kinds of Röntgen evidence have very far from equal value. An esophageal pouch, old cancer of the stomach, and calcified gallstone, are in a very different class from an early cancer, cholesterin stone, and intestinal adhesions. One class is clean cut, the other shades off into a very doubtful field. It may also be very hard at times to tell personal peculiarities from signs of disease.

There is great variation in skill and technique (and incidentally in expense) between private and hospital clinics and between large cities and small centres. I shall speak only of the limitations of the highest grade work.

Esophagus. In the esophagus spasm is intermittent, and may be entirely missed, or may be diagnosed as organic stricture or cancer. On the other hand cancer may be called spasm in the early stage before other deformity develops. Unless a cancer or other lesion is obstructive it may be missed, on account of the rapid passage of bismuth. The contour of small lesions is not distinctive.

Stomach. The value of the Röntgen-ray in comparison with the test meal in testing the motor power of the stomach has been much discussed. It is unfortunate we have no *standard*

* Read at the Nineteenth Annual Meeting of the American Gastro-enterological Association, Washington, D. C., May 8, 1916.

bismuth meal like the Ewald test breakfast. The bismuth or barium meals vary in character and amount and time allowed by different men. One uses cereal gruel, another buttermilk, another water; one a pint; one a half pint. Food may or may not be given during the first six-hour period. These results cannot be compared.

Carman in a recent valuable paper has compared the bismuth with other motor meals at the Mayo Clinic and finds a bismuth (6-hour) residue in 23% of a large series of cases, and a food (14 to 16-hour) residue in 13%. Ninety per cent. of the cases with bismuth retention had cancer or ulcer. It must be pointed out that this is not a comparison of Röntgen-ray and food tests, but of 6-hour and 16-hour retention. Naturally, six-hour retention is more common in pathological cases. If both tests are made in 6 to 7 hours, as was done by Levy and Kantor, the results compare closely in the surgical cases; and incidentally in a series of 185 cases, twenty-one per cent. had *no bismuth residue* but did have food residue, due to spasm or atony. This condition, missed by the Röntgen-ray and of little interest to the surgeon, is very important to the patient.

Ulcer. Some statistics claim 100% correct diagnosis in ulcer of the stomach. The facts are that in at least one-half, cancer cannot be ruled out . As Cole frankly says in one paper (The Negative and Positive Diagnosis of Cancer of the Gastro-Intestinal Tract): "For our purpose indurated gastric ulcer may be included under the term cancer of the stomach." The *size* of the ulcer helps, since McCarthy has shown that large ones are usually cancerous. "A lesion" can be diagnosed in the stomach with great accuracy, probably in 85% or more.

The diagnosis of organic hour-glass stomach from spasm is difficult at times. Atropin and bromides do not always exclude spasm. One woman of 24, found to have hour-glass stomach, was repeatedly examined with the Röntgen-ray, with a uniform result, even after full doses of atropin and bromide for several days, and definitely diagnosed as organic hour glass. Little gastric secretion was found and the stomach tube was passed before the fluoroscope to decide whether or not it reached the lower pouch. The hour glass vanished with the slight nausea due to the tube.

The diagnosis of a normal from an abnormal stomach is usually easy, but the diagnosis of reflex spasm from a lesion is hard.

Cancer. There is no difficulty in finding an old cancer of the stomach. Baetjer and Friedenwald report 95% correct diagnosis in a series of 50; but 70% *had a palpable tumor.* Carman reports 95% in the Mayo Clinic *with* 67% *palpable tumor.* Abnormal Röntgen findings in cancer and ulcer, are more constant than any other *single* clinical finding, but they have one disagreeable feature; they may be present where no organic lesion exists.

In the diagnosis of early cancer of the stomach (the only kind we are really interested in) the Röntgen-ray like every other present clinical method usually proves a failure. Men of large experience now and then report an isolated case or two, that is all. The reasons for this are easy to understand. There are few or no early symptoms and patients are rarely examined early enough to find early cancer. In the *only proved case* in my experience where a Röntgen diagnosis of *early* (or small) cancer was made the lesion was at the pylorus, and caused definite obstruction (12-hour stasis) and brought the patient *early* to the doctor's hands.

Second, the early anatomical changes like the symptoms and other signs are hard to recognize; the earlier the cancer the less clear the evidence. This is equally true of small primary induration or the transition stage from chronic ulcer to cancer. In a series of 114 cases of suspected cancer of stomach we were just as often wrong as right, in the effort to diagnose early cancer with Röntgen-ray. Baetjer and Friedenwald and others report a similar experience. A large, doubtful group of 20% or more is left after all examinations. Small lesions, which may or may not be cancer, can be found earlier and far more definitely since the use of the Röntgen-ray.

Cancers of the cardiac end of the stomach are peculiarly difficult to diagnose and are often missed on plates because this end of the stomach is only partly filled. It is practically impossible to diagnose cancer from syphilis of the stomach.

Duodenal Ulcer. Here we find the highest accuracy in the digestive canal; the pathology is practically all in one place, the first inch or so of the duodenum, and attention can be concentrated on this very small area. We get approximately 90% correct diagnosis of chronic duodenal ulcer with the best technique. Defects in the "cap" are very constant in chronic ulcer but adhesions may give every sign of ulcer; and spasm of the "cap" in such irritative lesions as gallstones or appendix may prove troublesome. In fresh bleeding ulcer of the stomach and duodenum the Röntgen-ray often shows no sign.

Gallstones. Very careful thorough work has been done in the last few years in improving gallstone photography and the interpretation of plates (both of which require the very best technique and the greatest experience) and many stones are found now which would have been missed a year ago.

Statistics of accurate diagnosis have crept up from 5 to 50% or even "practically 100%" in some hands.

To answer the questions, How many gallstones are found? How many are missed? present statistics are worthless for the following reasons:

The diagnoses in only a small portion of the

abdominal cases examined by the Röntgen-ray are verified. About 20% are verified by operation. Eighty per cent. are not. It is also misleading to base statistics on operated cases alone, for if stones are found the patient is operated upon; if stones are not found, the patient is not anxious for operation and often is not urged. In short, if stones are found, we know it; *if stones are missed we do not know it.*

How many are missed in this big unverified group? Some bold spirits will say none; some, 50 or 60%, and some, 90%.

Statistics of the percentage of gallstones ruled out by Röntgen examination (negative diagnosis) based on cases operated upon for other diseases (ulcer, cancer, appendix) have little value. Compare ruling out a stone in the urinary bladder in cases operated upon for cancer of the stomach. There is no relation. It is setting up a man of straw to knock down.

A positive diagnosis of gallstones has, in general, great value, a negative diagnosis has little value. This is not said to minimize the valuable work done, but we must not get ahead of our facts.

At the Mayo Clinic last fall I saw many cases operated upon and gallstones found, in which no Röntgen examination of the gall bladder had been made. On asking why, I was told that it was not worth while. If the patient had a clear history of chronic gall-bladder disease, he would be operated upon just the same, whether stones were found or not, and in some such cases a negative Röntgen report made it more difficult to get the patient operated.

A last new difficulty has been met. An occasional enthusiast in his eagerness to diagnose all gallstones (and keep his record high) finds them repeatedly when they are not present, thus defeating his object and taking a little more from the accuracy of the diagnosis.

Appendix. The Röntgen-ray shows pathology in the appendix region, the size, length, and position of the appendix, also kinks, adhesions, tender point, partial obstruction of ileum, stasis in the appendix, etc., but there is much uncertainty about the diagnosis (also about the pathology and clinical importance) of a "chronic appendix." My impression is, from hospital patients who have been operated upon, that a correct diagnosis is made in about one-half the cases; that a negative finding is usually correct, that a positive diagnosis needs to be strongly backed up by clinical findings. There seems little confirmation of George's statement that the appendix always fills if normal, and if unfilled is pathological.

Intestinal Adhesions and Stasis. There are no laboratory findings to show adhesions and no characteristic history. The best diagnosis is made by Röntgen-ray. They are often missed by the plate alone, but are rarely missed by a combination of fluoroscopy and plates. Of course adhesions may kink the bowel at one time and not at another.

Intestinal stasis is important only if marked and if we have other clinical data to go with it. Ileal stasis is important only if 12 hours or more and only if the stomach empties promptly. This simple rule is often forgotten, but if the stomach takes 12 or 24 hours to empty, a fresh supply is being poured into the ileum for that period or longer. In short, we must figure from the time the *stomach* is empty, not the mouth.

In examining the colon in constipated people, we omit laxatives and may find great delay in the whole colon which is difficult to interpret. Is it the result of a sudden break in a long drug habit, or something more? It is a misfortune that medical men did not begin their Röntgen-ray work in abdominal diagnosis with normal people, then the wide normal variation due to food and muscle tone and innervation would be better known.

Let me emphasize, in closing, that the Röntgen-ray examination of the gastro-intestinal organs is one of our most valuable clinical methods, but like every other clinical method such as the physical examination of the chest or urine, or sputum, or stomach contents, or serum tests, it is beset on every side by limitations, and these must be fully recognized to get the most out of it.

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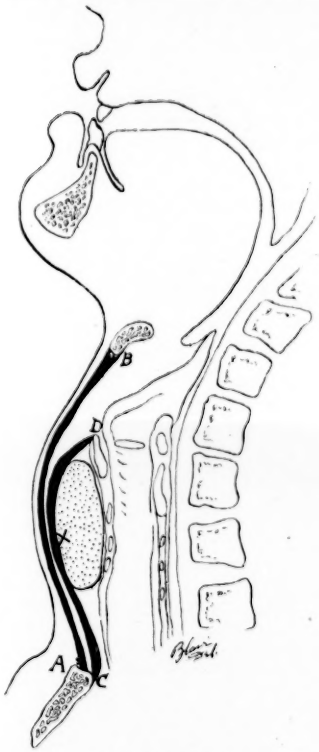
THYROID ABSCESS: (WITH MENTION OF TWO NEW SIGNS OF THIS CONDITION).

BY FRANK H. LAHEY, M.D., BOSTON.

THERE has been almost no mention in the surgical literature of thyroid abscess, and up to within a short time it was my opinion that it was a rare condition. Within the last few months, however, I have, among the considerable group of thyroid cases coming under my observation, had the opportunity of seeing and operating upon three cases of this sort, each occurring so typically that it seems worth while briefly to speak of this subject and at the same time speak of two signs which have been present in each of those cases, and of which I have seen no mention before.

In two of these cases there was a past history



DIAGRAMMATIC DRAWING.
A-B—Sterno-hyoid. C-D—Sterno-thyroid.

of tonsillitis and in the other the abscess appeared during recovery from a broncho-pneumonia. One case was sent to the hospital as a cyst of the thyroid, and other than the two signs to be spoken of later, had practically every appearance of that condition.

In all three of the cases there was swelling over the thyroid gland reaching across the neck and corresponding for the most part to the outline of the thyroid gland.

In one case there was some redness of the skin over the swelling. In the other two cases the skin was normal in appearance.

There was fluctuation in all three cases, although it was not easy to appreciate, since the pus is overlaid by two sets of fairly well developed muscles.

Temperature and leucocytes were present in two of the cases and in all three there was tenderness on pressure directly over the swelling.

The two signs spoken of above and present in all three cases are limitation of chin elevation and depression of the chin on the sternum when swallowing.

These two signs, I believe, are of great significance in cases suspected of thyroid abscess. They are brought about by the action of the sterno-hyoid, sterno-thyroid and omo-hyoid muscles on the abscess beneath them. From the diagrammatic drawing, one may easily perceive how the pain may result from tightening of these muscles, and how tightening as the result of swallowing may be prevented by depression of the chin upon the sternum.

It is evident that elevation of the chin results in pressure on the abscess at the point X from tightening of A-B and C-D, and hence the production of pain. If one recalls now that these three muscles act as depressors of the hyoid bone and thyroid cartilage in the act of deglutition, one can see how on contraction of those muscles pressure is exerted on the abscess again at the point X. If now the chin is depressed upon the chest at the moment of swallowing, one can see because of the approaching of point A to B, C to D, that complete contraction of these muscles, because of their laxness, will be impossible, and so pressure over the point X prevented or diminished. Depression of the chin upon the chest is the natural position, then, for these cases to assume on swallowing.

The treatment of these cases is simple incision and drainage. It is important, however, to dissect carefully down to the gland, under local anesthesia, and to cut the fibres of the sterno-hyoid transversely for a short distance on each side of the median line, as on account of the longitudinal tension of the sterno-hyoid and sterno-thyroid there is a tendency for any other incision to come together, thus interfering with drainage. On establishing drainage, recovery was rapid and uneventful in these cases.

AN ANATOMICAL FACTOR AS A CAUSE OF PYORRHEA.

BY CAROLUS M. COBB, M.D., LYNN, MASS.

WHEN we first began to realize the importance of foci of infection as the cause of obscure general disease, the teeth began to receive their share of attention. Pyorrhea has for some time attracted a great deal of consideration without any great progress being made toward its cure. Various theories as to its cause have been advanced; at one time it was believed that the amoeba was the cause, and that by the use of emetine or some other form of ipecac, the disease might be eradicated. How fallacious this theory was is testified to by the disappointment of many patients. It was then thought that the deposits of tartar upon the teeth and, possibly, an acid condition of the mouth, was the cause of the disease, and many very ingenious instru-

ments were devised for the removal of these deposits, admirably suited to the purpose for which they were intended.

There is one important fact in relation to this disease which does not seem to have received the attention which it deserves, and this is the anatomical relation of the parts. When we examine the tooth joint we find that it is the poorest joint in the body, being a peg joint. It, furthermore, has two systems of circulation, both of which are terminal. If we bear this fact in mind, it will be readily seen that anything that interferes with the circulation, which is here very easily interfered with, would furnish a point of least resistance for the invasion of any form of bacteria. When infection once gains entrance at the junction of the gums with the teeth it is likely to progress until it invades the alveolar process, and then we have alveolar abscesses in one or more places. If this factor of a point of least resistance at the junction of the gums and teeth is taken into consideration, the successful treatment of this disease would not seem to depend upon any combination of chemicals in the form of tooth or mouth washes, or upon any particular device for removing tartar from the teeth. In the treatment, it is necessary to follow the lines of the treatment of similar diseases in other parts of the body.

It is necessary to give drainage to the collection of pus, as you would to pus in any other part of the body. After the drainage is established, the action of the leucocytes will prevent the extension of the disease, but where the circulation is so poor, as it is very likely to be in gums affected with pyorrhea, the effect of the leucocytes upon the bacteria is necessarily very limited. While there may have been cases of pyorrhea among our ancestors, it can be confidently stated that the disease was not at all prevalent, and that it is undoubtedly due to modern methods of living, and modern cooking. Our ancestors lived upon coarser food, and used their teeth to masticate their food, rather than as ornaments, therefore they did not suffer to any extent from this disease.

The old man who picked out, by preference, the dry crust of bread, and used his teeth to crack nuts finally wore his teeth out, but he did not suffer from pyorrhea, or even decayed teeth.

Modern cooking prepares food in such a way that the average individual does not see the necessity of masticating the food. If he does use his teeth for that purpose, he does it as a part of some cult. The consequence of this is, that the teeth are not properly nourished; the circulation in the gums is poor, and the gums are not able to resist disease. We must remember here, as elsewhere in the body, that the individual cures himself. If the circulation is good the leucocytes take care of the bacteria, and the disease will be overcome.

If the circulation cannot be improved, the disease will gradually progress: An illustration of this is furnished by the tooth which does not have another tooth with which it articulates; such a tooth rises up and becomes loose, and the circulation in the gums is so poor that it furnishes a culture ground for different forms of bacteria. Even these teeth can be improved, if an artificial tooth is furnished with which it can articulate. The tooth is pushed back into the socket by the act of mastication, the circulation improves, and the tooth becomes firm again. Of course all of the different methods of treatment have a beneficial effect, but until the circulation has been improved, the disease will recur again and again. I am in the habit of advising my patients to use a tooth brush on their gums, rather than on their teeth. This practice may at any rate temporarily improve the circulation. I am not at all sure that the old habit of gum chewing, which is now taboo in polite society, may not be a solution of the problem.

At any rate, we must do something to improve the circulation of the teeth, and gums, if we expect to retain our teeth, otherwise nature will take care of them as it does of other useless organs.

A FURTHER WORD ON THE STERILIZATION TREATMENT OF FURUNCULOSIS.

BY JOHN T. BOWEN, M.D., BOSTON.

IN the *Journal of the American Medical Association* of July 16, 1910, I published a brief notice of a simple method of treating furunculosis, which had proved effective in my hands in a large number of cases, including many in which the treatment by injection of vaccines had failed utterly. Starting with the premise that all furuncles are local and caused by the inoculation and auto-inoculation of pyogenic staphylococci, and are not produced by infection from within, the principle of this treatment is simply to keep the skin as far as possible sterile; as free from microörganisms as it is endeavored to maintain it in abdominal surgery. In order to effect this, the patient is directed to take a hot bath morning and night, scrubbing the whole body, including the head, while in the bath, with soap. It is best to use for this purpose a wash-cloth or a piece of flannel. This part of the treatment, I insist, must be done with the greatest care and regularity. After this thorough washing with soap and hot water, the skin is dried, and the whole surface again bathed, this time with a saturated solution of boracic acid in water, with the addition perhaps of a small proportion of camphor water. Although boracic acid is reputed to be a feeble germ-killer, my experience is that it is very effective in the case of pyogenic cocci that infest the skin, and it has the great advan-

tage of being entirely unirritating. Irritating antiseptics are to be carefully avoided in cases of pyogenic infection of the skin. After bathing thoroughly with the saturated boracic acid solution, the skin is not to be wiped, but allowed to dry as it is. Then the individual furuncles are treated by dressing them with the following ointment spread on cotton or linen and bound lightly on: viz.

Boracic acid	4.
Precipitated sulphur	4.
Carbolated petrolatum	32.

This procedure, thorough bathing and soaping, the application of the borated solution, and the dressing of the individual furuncles, is repeated, as has been said, *morning and night*. A further point of vital importance relates to the clothing that is worn next to the skin. *Every stitch of linen worn next to the skin* should be changed daily, and in the case of extensive furunculosis all the bed clothing that touches the individual, as well as the night clothing, should be subjected to a daily change.

This treatment has been uniformly successful in my hands in the treatment of the more or less chronic condition described as furunculosis, which means the repeated outbreak of furuncles, either singly or in numbers, extending over a period varying from several weeks to many months and even years. It cannot be claimed that this treatment at the beginning is a sure preventive of any further trouble. Nevertheless I have as yet seen no instance in which, where it was faithfully carried out, relief was not obtained within a reasonable time. Often, indeed, the succession of boils is interrupted at once. In other cases a few abortive lesions of small size may appear before the cure is complete. Naturally, this treatment must be continued for several weeks after the last evidence of pyogenic infection has appeared, and this fact must be emphasized to the patient at the outset. Many of the cases that have been referred to me have been treated repeatedly with injections of vaccines, in some instances with an apparent tendency to increase the lesions.

It may be objected that this treatment cannot be easily carried out. It certainly requires care and regularity, as it will fail unless scrupulously adhered to. The chief absorption of time is that required for a morning and evening bath. This is not too much to ask of a sufferer from an annoying and painful affliction, and my experience shows that it is gladly complied with by those seeking relief from a long course of eruptions. Most of the cases that have been treated by me are those in which the affection has been progressing for a considerable time, and who are willing to take almost any amount of trouble to obtain relief. Some writers, among others Riehl, have objected to bathing and to the use of antiseptic lotions in furunculosis as tending to spread the infection by transferring the microbes from one part of the skin to another. This can be true only of a very careless and insufficient bathing, or application of the antiseptic, and could be just as logically used as an argument against every surgical employment of soap and water.

With regard to the treatment of individual boils in general, it is not my purpose to speak here. The various procedures recommended and adopted are many. The ointment that I have given above has proved, in connection with the general sterilization, an effective application, but doubtless other combinations may be equally good. Poulticing to any extent is certainly to be avoided as tending to favor the soil in which the staphylococci are implanted, and very early incision is unnecessary and harmful, if it has to be followed by close-fitting dressings.

The success that has seemed to me to be obtained by this simple procedure has led me to call attention once more to its merits. It has also proved effective in the hands of various physicians, who have so assured me by word of mouth or by letter. Dr. E. P. Joslin makes mention of it in his recent book on the Treatment of Diabetes Mellitus, an affection that so often produces the peculiar and obscure individual susceptibility that makes one's skin vulnerable to the staphylococci. He tells me that he has had a good many diabetic patients with more or less furunculosis, under his care, who have been greatly helped by this treatment. Other physicians who have adopted with enthusiasm the vaccine treatment, regard cases that do not respond to it as incapable of relief by any other method. It is to such as these that I appeal for a trial of thorough sterilization.

Clinical Department.

TREATMENT OF PERFORATED ULCER OF THE STOMACH WITH THE DUODENAL FEEDING TUBE.

By Lester C. Miller, M.D., Worcester, Mass.

[From the Surgical Service of The Memorial Hospital, Worcester, by courtesy of Drs. L. F. Woodward and William Rose.]

REPORT OF CASE.

Mr. F. is a civil engineer of about 55 years, married and the father of children; he has followed his profession wherever it took him, sometimes into the tropical parts of Central America; but so far as could be determined, neither climate nor occupation had anything to do with the development of the condition for which he came to the hospital. His family history is negative. He had the usual children's diseases, and gives a history of rheumatic fever.

For the past four or five years he has had pain at irregular intervals in the epigastric region, which

has usually been relieved by hot drinks. This apparently is all the digestive disturbance that had made much impression on his mind. During the week preceding his entrance into the hospital he had a dull pain in the epigastrium, which gradually grew worse until two days before entrance, when it became very sharp. This pain radiated to the shoulders. He had vomited frequently. The vomitus was brownish, and the attending physician, Dr. Bliss, said he had seen some fresh blood in it. His bowels had not moved for two days.

He was admittted to the surgical service August 3, 1915. At the time of admission he was in a condition of collapse. He had been transferred six miles in an ambulance and had suffered from the jolting. The surgeons, who saw him as soon as possible, made a diagnosis of either gastric or duodenal ulcer, with a probable perforation; but a chest examination showed what appeared to be loud pleuritic friction rubs over the side and front of the left chest. He breathed with difficulty, owing to the pain in his chest, but at the same time he complained of a sharp pain in his epigastrium.

The writer was asked to see him about an hour after admission to the hospital for the purpose of deciding what the pleuritic sounds indicated, whether a lung condition with abdominal symptoms, or a gastric condition complicated by pneumonia. The question of most importance was whether we had to do with an operative case, and if so, was it wise to operate at once, or should we wait and study the condition a little longer? The patient was found sitting up in bed, looking over some business papers and giving directions to a member of his family about business affairs. He was a thin, spare man of medium height, his hair and mustache slightly gray. At the time he was breathing with difficulty. This was apparently due to a sharp pain in his left chest, in the mid-axillary line, whenever he attempted to draw a long breath. The chest pain was more troublesome than the abdominal one. He leaned forward in bed to ease his pain and was sweating freely. His color was poor. The whole appearance was suggestive of shock.

A brief examination confirmed the previous findings of the interne and the surgeons. There was a loud friction rub over the base of the left lung anteriorly, extending back to the mid-axillary line. The abdomen was rigid over the whole epigastrium, and pressure showed it to be very sensitive. It was impossible to make out any tumor mass or other clues to the abdominal difficulty. There seemed to be sufficient evidence of perforation and peritonitis, but at the same time, the symptoms of lung involvement were so marked that the several consultants decided that surgical interference was unwise. It is still an open question in the minds of all the consultants whether this was a proper decision. Since studying the subject more carefully, the writer is satisfied that so far as he influenced the decision, his opinion was founded on an incorrect interpretation of physical findings. The friction sound heard at the base of the left chest anteriorly was probably not in the lung, but was between the distended stomach and the lower surface of the diaphragm. This symptom has been reported by Brenner in five out of six cases soon after perforation. He says it is caused by the fluid stomach contents mixed with air crowded between the diaphragm and the distended stomach, and that it is characteristic of perforation only in the first few hours thereafter. The later developments of this case demonstrated clearly that there was no lung involvement.

For several days following entrance, the patient seemed to improve in his general appearance; his white blood count, which was 30,400 at entrance, the next day was 25,000 whites, the fourth day was 17,400 whites, the seventh day was 15,500 whites. The hemoglobin was 90%. The urinary findings were not important at this time. The upper abdomen still showed marked muscular rigidity and some tenderness on pressure. It suggested to all who examined it that there was either a tumor mass or a pocket of pus in the left upper quadrant and in the epigastrium. Finally, after eleven days' observation, it was the consensus of opinion that an exploratory laparotomy should be done.

Dr. Rose opened the abdomen in the right upper quadrant about an inch to the right of the median line. The liver presented in the opening and appeared much enlarged; it was covered on the anterior and lower surfaces with a thick gelatinous pus-like exuxdate, so thick it had to be taken out by handfuls. This pus pocket extended to the extreme left side well up into the upper left quadrant to the diaphragm. It appeared to be confined to the lesser peritoneal cavity. There were so many adhesions to adjoining parts that it was not safe or easy to separate enough of them to see more of the stomach than presented in the opening. No perforation or gallstones, or malignant growth could be found. Two drainage tubes were introduced, one from the upper corner of the cavity close to the diaphragm, the other from behind the stomach. An immediate examination of the pus while the patient was on the table did not show any organisms, but a culture showed a very slight growth of atypical streptococci.

Mr. F. rallied from the operation fairly well, and, aside from the usual post-operative discomforts, he seemed none the worse for the surgical interference. His bowels continued to move with the assistance of enemata; but the third day after the operation it was noticed that the discharges on the dressings had a foul odor. There were "curdy flakes" observed, and for several days the amount of the discharge was enormous, one day necessitating six changes of the dressings. The eighth day, the record states, there was a discharge of pus, of a thick white fluid and of some blood; note is also made that day of the excessive irritation about the edges of the wound. Up to that time the diet had all been liquid, but that day "soft diet" was given the patient. The next day some tapioca pudding, given at lunch, appeared on the dressings. The next day blueberries were given for an experiment, and they appeared on the dressings in three-quarters of an hour. Liquid diet was resumed.

The digestive action of the discharges increased and was a source of great distress to the patient. The edges of the wound were actually digested, and the surface of the skin for an inch or two about the opening was red and excoriated. It was possible to relieve the irritation a little with lime water washes, and other alkaline applications, but it was found finally that zinc ointment with an equal amount of starch added, was the most comfortable, and it was thought that he did not lose solution in the same way; the patient's thirst was severe, and he lost flesh and grew progressively

weaker. Sitting up in bed made him more comfortable, and it was thought that he did not lose quite so much food by way of the abdominal opening. After he began to sit up, his temperature, which had been slightly elevated, began to fall.

At this time, fourteen days after the operation, Mr. F.'s emaciation had become so marked, and he suffered so much from lack of proper water supply for his tissues that it did not seem at all likely that he could recover unless some means of feeding were devised at once. The writer had recently read Morgan's very enthusiastic account of his experiences with Einhorn's duodenal alimentation tube, and suggested that it be tried on Mr. F. The surgeons gave the medical staff a free hand to do as they pleased, and the patient was ready to grasp at straws, so that he was not only a very intelligent assistant, but a willing one. He quickly grasped the mechanical features of the apparatus, and made every effort to make it a success.

To quote from Morgan's description: "The Einhorn duodenal feeding and stomach test apparatus consists of a small gold bucket perforated with several small openings, and capable of being taken apart for the purpose of cleaning; a rubber tube of small caliber leading to the bucket; a rubber pet cock and a feeding table, an ingenious arrangement which rests over the glass of nourishment so that the food may be drawn up through one tube into a glass syringe and be forced slowly into the tube connecting with the duodenal tube, without disconnecting the syringe."

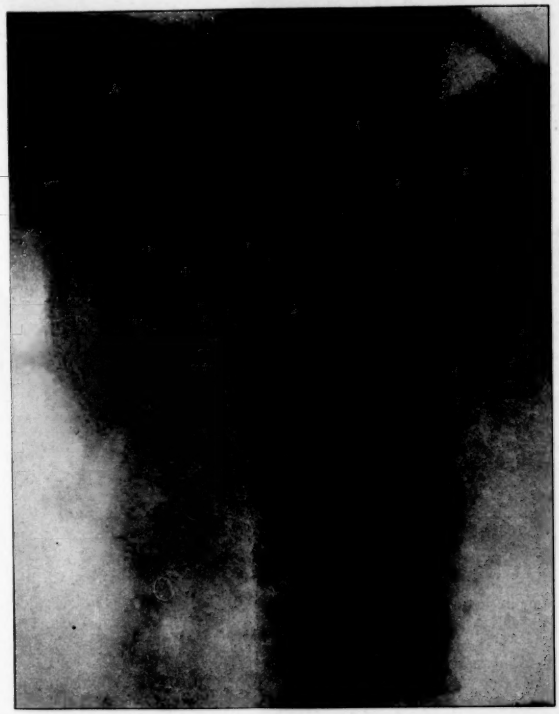
After the purpose of the tube had been explained, Mr. F. swallowed the little bucket and the tube as far as the first mark without much apparent difficulty or discomfort. He described the sensation as the same as a large dry tablet swallowed without water would cause. The first mark indicated the point on the tube when it may be supposed that the tube has entered the stomach; the second mark, the point when the bucket is at the duodenal opening; and the third mark the point when it may be supposed the bucket has entered the intestine. Mr. F. was lying in bed, turned slightly toward the right side. After swallowing the second portion of the tube, he was given some fluid nourishment and swallowed the tube up to the third mark. At the end of about five hours six ounces of milk were pumped through the tube, and within ten minutes it appeared on the dressings. This was the case with every feeding that day and the next. An x-ray picture was taken, and it showed the tube to have turned toward the left side of the stomach instead of the right. The tube was withdrawn to the first mark and solid food given by mouth, then the tube gradually swallowed until it reached beyond the third mark. The next day feedings through the tube were begun again, and the patient knew at once that the warm liquid reached into the intestine by the comfortable warm feeling in his abdomen about the level of the umbilicus. None of the eggnog appeared on the dressings, and the discharges decreased in amount at once. Subsequent feedings were given every two hours, and none of the liquids ever appeared on the dressings. In three days the patient began to appear brighter, he was noticeably stronger, his thirst satisfied, and his color improved. Through a misunderstanding of the order about solid food, it was continued three days after the successful feeding with the tube was begun. In spite of this, no solid food appeared on the dressings. After the solid food was stopped, the discharges dried up even more, and the abdominal incision began to close up. Ten days after the tube feeding was started, the drains had been removed and in a day or two the wound had closed; but two stitch abscesses had developed meanwhile in the area which had been bathed in pus and the food discharges. These abscesses were troublesome, but did not very much delay the convalescence.

Twenty days after tube feedings were begun, the tube was withdrawn, and after trying liquids by mouth without doing any apparent harm, Mr. F. began to eat most things that he cared for, except some restrictions as to nitrogenous foods, because he showed some renal irritation. He had worn the tube constantly and, except for the first irritation of the esophagus from swallowing a hard pill-like substance, he had never complained of any discomfort connected with the tube in his throat or mouth; in fact, he hung the loop of the tube over his right ear and seemed to forget all about it, talking as easily as without it. By tube he had been fed milk and eggs, thin gruels, fruit drinks fortified with milk sugar, plain water, and pea soup. His weight "picked up" during the tube period, probably because his tissues were better supplied with water; he very rarely complained of hunger, and when he did it was more of the desire to "set his teeth into something."

Several interesting questions came up in the course of the treatment of this patient. One of the first was whether or not he was benefited by the operative interference. This, of course, was raised after the condition in the lesser peritoneal cavity was found, and it was seen that the pus was "drying up." Before operation there was only one opinion, and that was in favor of operation. The pus organisms did not appear to be at all virulent, and the cavity was well walled off from the rest of the abdominal cavity, so that the chance of the extension of the peritonitis was probably slight, if any. It is possible that the perforation had been sealed up by adhesions, and that it was pulled open in the attempt to evacuate the pus. Such a case is reported by J. W. Struthers. With the post-operative knowledge that we have of this case, it seems to the writer that this patient would probably have gone on to recovery without operative interference. But it is his opinion that such cases of perforation are the exception rather than the rule, and that immediate operation in all known or probable cases of perforation should be the working rule of both internist and surgeon.

The location of the ulcer was never definitely determined. The x-rays taken both before and after operation did not help to decide this point. It is the writer's opinion that the perforation was through the lesser curvature somewhat anteriorly. This opinion is expressed, first, because this is the well-known favorite site of perforations and second, because the escape of fluids from the stomach was less when the patient sat up in bed.

The most complete statistics of perforated ulcer of the stomach and duodenum, that were



TUBE IN STOMACH AND DUODENUM (PICTURE REVERSED IN PRINTING.).

at the writer's disposal, were published in *The Edinburgh Medical Journal* of 1913-14. These were collected in the so-called Edinburgh district, which has a population of approximately half a million. The schedule of inquiry was first very carefully drawn up, and the analysis of the cases was made from these schedules. The two groups of ulcer were considered separately, the duodenal ulcers being investigated first. The period in the first instance was from 1908 to 1912, and in the second from 1908 to 1913.

Of the 200 cases of duodenal perforation 121 recovered and 79 died. The sex incidence was 8.5 males to 1 female. The youngest patient was a boy of 14, the oldest a man of 69. The main incidence of the affection was between the twentieth and fiftieth years. In the gastric series of 247 cases there were 142 recoveries and 105 deaths. The sex incidence was 2.2 females to 1 male. The youngest patient was a boy of 12 1-2 years, the oldest a man of 76. The largest proportion of cases occurred between the ages of 20 and 30.

Occupation did not appear to have any bearing in either series of cases. This was especially considered because of its bearing on the operation of the Workingmen's Compensation Act.

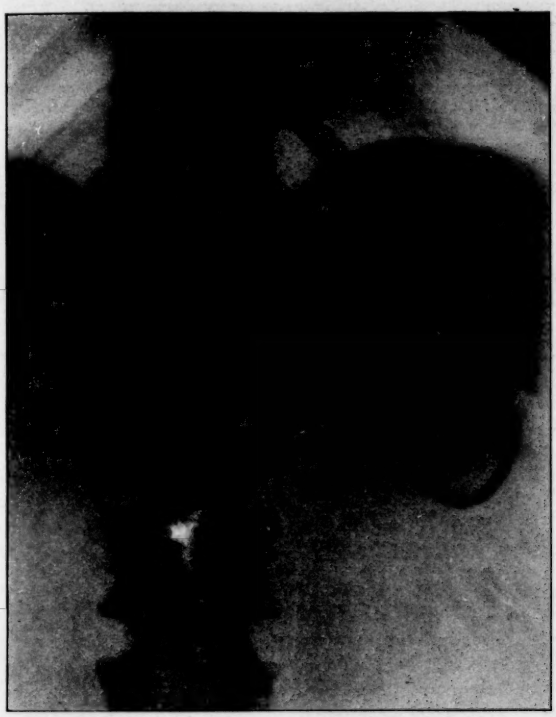
Less than half, or 90 out of 200 duodenal cases, gave a well-marked history of previous digestive disturbance; while over half, or 146 out of 247 gastric cases, gave a history of marked digestive disturbance.

The location of pain was interesting from a diagnostic point. In the duodenal cases, in which this point was brought out, pain was usually felt towards the right side of the median line; while in the great majority of gastric cases the pain was in the epigastrium and, as a rule, toward the left of the middle line.

Vomiting was a much more common symptom in gastric than in duodenal cases.

There was agreement in practically every case of both kinds concerning the agonizing pain which accompanied the perforation. The writers made a diagnostic point of the difference in the onset of this pain and that of appendicitis, which is slow in developing and mild at first, while perforation pain is rapid and severe at first.

An interesting condition noted in nearly all cases was an apparent lull of a few hours in



Tube in Stomach, not in Duodenum (Picture not Reversed in Printing.).

the symptoms after the first sharp attack had passed. Usually this was followed by symptoms of general peritonitis. The writers warn readers against the false security which this apparent cessation of symptoms may give the patient and his attendant. They advise immediate operation before general peritonitis develops.

The site of the perforation in the duodenum was made out in 120 cases. In 101 cases it was on the anterior surface within 1 1-2 inches of the pylorus, in 13 it was on the superior surface; and in 4 on the posterior surface. In the gastric cases 207 were near the lesser curvature; 2 were near the greater curvature, all of these on the anterior wall. There were 19 perforations found on the posterior wall near the lesser curvature.

The most common complications were of the septic pulmonary type, and subphrenic abscesses.

It will suffice to mention only two of the surgical measures employed. It was found that wiping out the abdominal cavity with dry sponges was a much more satisfactory measure than the use of salt solution. Second, in nearly all cases of infection of the general peritoneal cavity suprapubic drainage of Douglas' pouch was established and, in the cases of more recent years, no drainage was attempted at the site of operation, but the patient kept in Fowler's position.

As might be expected, with greater familiarity with these cases and earlier diagnoses, each succeeding five-year period showed better results from operative treatment.

Since preparing the above report the writer has had an opportunity to attempt to feed another similar patient, in the service of Dr. Homer Gage, at the Worcester City Hospital.

The onset and other conditions of the case were so nearly the same as the above that they do not require detailing. It is enough to state that the stomach contents had been escaping through the abdominal incision for eleven days prior to the attempt to feed with the duodenal feeding tube. The patient's tissues were so very dry that it was almost impossible for him to swallow the tube. After the end of the tube was in the stomach it was difficult for him to get any more tube down the œsophagus; it stuck and doubled up so much *en route* to the stomach that one could not be certain whether

the tube finally found its way into the duodenum or not. X-rays were made, but for some reason they failed to show any of the tube or even the metal tip. The effort of having the pictures taken exhausted what energy the patient had left, and he failed rapidly after that, and died within fourteen hours.

The type of man made a great difference in the help given in introducing the tube in these two cases. The first man was alert and determined to recover; the second was easily discouraged and lost his grip early. It seems an obvious conclusion to the writer that if this method of feeding becomes necessary in such cases as these, the earlier it is begun the better are the chances for success.

It is more than a year now since the first patient was treated, and he is still living and in fair health. He suffers from minor digestive disturbances, but is able to attend to his professional work.

Book Reviews.

Diseases of Children. By EDWIN E. GRAHAM, A.B., M.D., Professor of Diseases of Children in the Jefferson Medical College, Pediatrist to the Jefferson Medical College Hospital and to the Philadelphia General Hospital, Philadelphia; Consulting Pediatrist to the Training School for the Feeble-Minded at Vineland, N. J.; Member of the American Pediatric Society. Illustrated with 89 engravings and 4 plates. Philadelphia and New York: Lea & Febiger. 1916.

This, the latest of the American text-books on the diseases of children, and the first for many years from Philadelphia, contains an immense amount of valuable material on the subject. It is manifestly the work of a practitioner of great experience in his specialty rather than that of a man who has devoted himself to laboratory investigations. It is, therefore, especially strong as regards the symptomatology and treatment of disease and should consequently be especially useful to the general practitioner. Pictures are relatively infrequent, but what there are are well-chosen and illuminating. The arrangement of the book is somewhat peculiar and symptoms are often given equal importance with diseases. The chapters on Infant Mortality, Heredity and Environment, Puberty and Dentition are somewhat unusual and well worth careful study. The chapters on Infant Feeding are in general very satisfactory and up-to-date. The classification of the diseases of the gastro-intestinal tract is complicated, and it seems to the reviewer confusing. While exception might be taken to the author's statements on many minor points, in general there is little to criticize and much to commend. The practitioner or student who thoroughly familiarizes himself with the contents of this work will certainly find himself well equipped for practice among children.

Diseases of the Eye. By GEORGE E. DESCHWEINITZ, M.D., LL.D., Professor of Ophthalmology in the University of Pennsylvania. Eighth edition, thoroughly revised and enlarged. Octavo of 754 pages, 386 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company. 1916.

The eighth edition of this standard text-book keeps up to its reputation. A comparison with the previous edition shows how thoroughly it has been revised, and many new subjects introduced, such as Walker's method of Perimetry, Squirrel Plague Conjunctivitis, Anaphylactic Keratitis, Preliminary Capsulotomy, Iridotasis and West's operation of resection of nasal duct. Col. Elliot has written the description of Corneoscleral Trephining. Several new illustrations have been added. These are only a few of the improvements, and the printing and paper are more satisfactory than in the previous edition. We consider this the best American text-book of diseases of the eye.

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Edited by P. G. SKILLERN, JR., M.D., of Philadelphia. Philadelphia and London: W. B. Saunders Company. October, 1916.

This number still maintains its well-known characteristics. It contains more than thirty subjects and many illustrations. The first chapter is about thirty pages in length, and is called a Talk on Varicose Veins and Varicose Leg Ulcers. It is one of the best summaries of recent literature and modern practice which the reviewer has seen. Following this, by Dr. Murphy himself in June, 1915, is an interesting clinic given to the Railroad Surgeons, in which thirty traumatic cases were shown; most of these were end-results, illustrating the sorts of lesion which the railroad surgeon is most apt to encounter.

The October number also contains chapters on lesions of the various bones of the face and head: a series of benign as well as a series of malignant tumors, with operation; a number of genito-urinary cases, and the description of two interesting operative attacks upon the knee joint. The illustrations and text continue to be equal to the well-known previous standards.

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Ernest Gregory, *Manager,*
126 Massachusetts Ave., Corner Boylston St., Boston, Massachusetts.

CHARLES FRANCIS WITHINGTON.

The death of Dr. Charles Francis Withington, not unexpected after a trying sickness of several months, bravely borne, takes away one of the distinguished Boston figures in the medical profession. Since his graduation from the Harvard Medical School in 1881, Dr. Withington had been a practitioner, teacher and writer of wide experience and valued service. As a clinician he served the Boston City Hospital for many years, and as an internist and consultant he became skilled and extensively known throughout New England. From 1886 to 1891 he was an editor of the Boston Medical and Surgical Journal, and many of his abundant contributions to the scientific literature of medicine have appeared in its columns. In 1914 the Massachusetts profession, in recognition of his eminent professional distinction, honored itself by electing him to the presidency of the Massachusetts Medical Society, an office whose duties he discharged for two years with able, characteristic, and effective thoroughness.

Dr. Withington was a gentleman, a kind and good physician, and a scholar; courtly, courteous, and beloved, as well as respected, by patients, colleagues and all others who knew him. His keen wit and good humor made him a delightful companion to his intimates. His brilliant literary style and scholarly attainments were an ornament to the columns of this Journal. He was in all respects a man of distinction, and his loss is felt not less by his younger contemporaries than by his coevals in the community and the profession.

THE TREATMENT OF SYPHILIS.

Since the introduction of Ehrlich's arsenical preparations, salvarsan and neosalvarsan, there has been some modification of opinion as to the amount of certainty of cure attending them, and the amount of danger accompanying the use of these preparations; and although they are still accepted as the principal therapeutic agents in the treatment of syphilitic conditions, they are no longer depended on entirely to effect the cure. The old-time mixed treatment with mercury and the iodide of potassium still has a place within the interval between the salvarsan injections. Since the introduction of the arsenical preparations, the amount of treatment necessary to be taken by a patient has become by comparison relatively small, and the amount of disability in hospitals, or otherwise, has become almost negligible. Results in chronic cases are particularly marked after there has been over-treatment with mercury, where it seems that there has been established an anaphylaxis or sensitiveness to this drug, and manifestations aggravated rather than improved. Yet the failure attending the use of the arsenical preparations in cerebrospinal syphilis can be explained only on the ground that the drug, under the ordinary methods of application, does not penetrate into these recesses. Even the ordinary diagnostic serum reactions do not operate in this form of syphilis. The previously known "parasyphilitic" affections, such as tabes dorsalis or general paresis, are now understood to be active syphilis, in which the infective agent is hidden away within the cerebrospinal system, is not diagnosed by ordinary reactions for syphilis nor affected by the ordinary methods of treatment. The hidden character of the infective agent in these chronic luetic conditions of the nervous system has a parallel in the chronic malarias,

in which the plasmodia are no longer found in the general blood stream, but are hidden away in the usually much enlarged spleen.

The so-called "parasyphilitic" affections are now diagnosed by lumbar puncture in the very early stages, before the damage is so great that neither diagnosis nor treatment can avail to influence the course of the diseases. It is considered that the presence of leucocytes and an increase of globulin content are indications of the presence of cerebrospinal syphilis.

In general, the dangers of the use of these arsenical preparations are almost nil, particularly with the use of the neosalvarsan. However, it must be used guardedly in such conditions as renal insufficiency, advanced cancer, Addison's disease, arteriosclerosis, chronic intoxications, existing diseases of the nervous system, and in any condition where there is capillary degeneration. Ehrlich's contraindications are the triad,—aortitis, coronary sclerosis and myocarditis. To these may also be added diseases of the optic or auditory nerves, chronic meningeal congestions or diseases, and terminal cerebrospinal conditions. In any event the use of this drug, because it floods the system with a large amount of highly toxic and irritating material, is in the nature of heroic treatment, and must not be undertaken without a thorough knowledge of the patient and his constitution. And even in the classic contraindications it will yet be a matter for the judgment of the physician to determine on the use or on the rejection of these valuable preparations.

ORTHODONTIA IN MEDICINE.

WHILE the mechanical side of dentistry has perhaps developed far too rapidly when compared with the purely therapeutic side, it is to be given credit for giving birth to an almost new art—that of orthodontia. While the art is still young, it has already found a very important place for itself in dentistry, and, what is of significance to the medical profession, it is being successfully applied to the correction of certain medical conditions which heretofore seemed to be beyond remedy. Up to this time the orthodontist has busied himself with the correction of misformed, malformed and occluded teeth, particularly for esthetic or cosmetic purposes. But in the correction of these dental deformities it was found that not only was the entire conformation of the face changed and the appearance improved, but that there was a marked improvement in the general condition of the child. The tendency to facial—bony—malformations in the civilized races is very great. In civilized races there has been, anthropologically speaking, a development of the cranium and the cranial bones, at the expense of the facial bones. Under these circumstances the maxillary bones become too small in circumference to accommodate comfortably the dental units. Malformation of the teeth, occlusion, and the like, occur as the natural result. It is needless to point out the effect upon the general health of the child of these badly formed and poorly acting teeth.

But the abbreviation of the maxillary circumferences, particularly of the superior maxillae, not only causes these dental malformations, but also produces a narrowing of the entire nasal and naso-pharyngeal cavities. There is a gothic vaulting of the palatal arch, deflection of the septum because its quarters are too close for it to stand erect, and, in general, a closer convention between all the bony parts. In the aboriginal races, on the other hand, in the negro, for example, even very profound bony malformation of these parts will produce hardly any obstruction to breathing. In them, if anything, there has been a development of the facial bones at the expense of the cranial.

It can be seen that the obstruction from these anthropologic variations can easily be, and usually is, confounded with obstruction due to purely adenoid vegetations or local intranasal obstruction. It is so often a source of chagrin that the removal of apparently adenoid obstruction does not effect relief. Even before there is time to recover from the operation, there is said to have been a recurrence, when in fact little or no adenoid vegetation has been removed. Any temporary relief is usually due to the enlargement of the cavity by the removal of mucous membrane. It is in these conditions that orthodontia has been advised. Of course, orthodontic measures can be applied only to the young, before complete ossification has set in. Before this time rapid separation of the superior maxillae can easily be accomplished, and the nasal and nasopharyngeal cavities be insomuch widened. Improvement in breathing and in the general and mental condition of the child is perhaps more marked than after the removal of the classic adenoid obstructions.

MEDICAL NOTES.

HONOR FOR DR. FLEXNER.—Report from Paris on December 21 states that Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, New York, has been elected a foreign associate member of the French Academy of Medicine.

HONOR FOR DR. WALDEYER.—It is announced that on October 6, 1916, the eightieth anniversary of his birth, Dr. Wilhelm Waldeyer, who has been professor of anatomy at the University of Berlin since 1883, was made an hereditary peer of the German Empire. Many other honors were also conferred upon him. Dr. Waldeyer's health is excellent and he continues in active pursuit of his teaching work and investigation at Berlin.

FIRE IN A MEDICAL SCHOOL.—On December 7 a damage of $50,000 was caused by fire in the building of the Indiana University School of Medicine at Indianapolis.

PREVALENCE OF DISEASE IN VIRGINIA.—The weekly report of the United States Public Health Service for December 15, 1916, notes that during the month of October there were in Virginia 1079 cases of malaria, 6 of meningitis, 25 of pellagra, 48 of poliomyelitis and 456 of typhoid fever. During the same period there were also in Virginia 501 cases of diphtheria, 377 of measles and 258 of scarlet fever.

PREVALENCE OF DISEASE IN THE UNITED STATES.—The weekly report of the United States Public Health Service for December 29, 1916, states that during the month of November there were in Ohio thirteen cases of meningitis, sixteen of poliomyelitis, 126 of smallpox and 324 of typhoid fever. During the same period there were in Louisiana 61 cases of malaria, 65 of smallpox and 105 of typhoid. There were 125 cases of malaria, 18 of pellagra and 34 of typhoid in South Carolina. In Minnesota there were 50 cases of poliomyelitis, 41 of smallpox and 72 of typhoid. There were 39 cases of poliomyelitis in New Jersey, 198 of smallpox in Michigan and 160 of typhoid in West Virginia.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The annual meeting of the American Association for the Advancement of Science was held in New York on December 26 to 30, 1916. At its closing session Professor Theodore Richards of Harvard was elected president for the ensuing year, and Dr. C. E.-A. Winslow of Yale, vice-president, and head of the section on physiology and experimental medicine. The next meeting will be at Pittsburgh, Pa., from December 28, 1917, to January 2, 1918.

NEW YORK ACADEMY OF MEDICINE.—At its annual meeting on December 7 the New York Academy of Medicine elected the following officers for the ensuing year: President, Dr. Walter B. James; vice-president, Dr. Edwin D. Craigin; trustee, Dr. Charles L. Dana.

ROCKEFELLER HEALTH COMMISSION.—In previous issues of the JOURNAL we have noted the expedition of five members of the International Health Board Commission sent by the Rockefeller Foundation on June 15, 1916, to study yellow fever and other contagious tropical diseases in Central and South America. This commission consisted of Dr. William C. Gorgas, Dr. Henry R. Carter, Dr. C. C. Lyster, Dr. Eugene R. Whitmore, Dr. William R. Wrightson and Dr. Juan Guiteras. Dr. Guiteras has remained at Barbados to investigate yellow fever conditions there. The other members of the commission have returned to the United States. The details of their investigation and their recommendations will be published through the Rockefeller Foundation.

EUROPEAN WAR NOTES.

SCARCITY OF PHYSICIANS IN ENGLAND.—At a recent meeting of the Glasgow Victoria Infirmary, according to a report from London on January 3, the opinion was expressed that before the end of the present war private practitioners in Great Britain will have become virtually nonexistent and all civil patients requiring treatment must go to infirmaries. The *Lancet*, in a recent issue, says in this connection: "There must come a day, if the war is indefinitely prolonged, when the necessary economy of medical men can be obtained only by mobilization of the whole of the available supply, so that calls can be made upon individual services when and where required. It has long been felt that some such step might be taken and we believe that the general opinion of the medical profession, judging by the correspondence that comes to us, is in a similar direction.

WAR RELIEF FUNDS.—On Jan. 13, the totals of the principal New England relief funds for the European War reached the following amounts:

Belgian Fund	$235,971.05
French Wounded Fund	181,037.19
Armenian Fund	137,894.55
French Orphanage Fund	75,356.29
Permanent Blind Fund	63,893.33
Italian Fund	28,896.00
French Phthisis Fund	13,073.44
French Blind Fund	2,282.00

A NEW BELGIAN MEDICAL JOURNAL.—The establishment is announced of a new Belgian medical journal, the *Archives Médicales Belges*, to be published from the Cabour Military Hospital, Adinkerke, and to correlate all the medical activities of the exiled nation. The first issue is to appear in January, 1917.

BOSTON AND NEW ENGLAND.

WEEK'S DEATH RATE IN BOSTON.—During the week ending Saturday noon, Jan. 13, 1917, the number of deaths reported was 270, against 327 for the same period last year, with a rate of 18.23, against 22.42 last year. There were 37 deaths under one year of age, against 43 last year, and 93 deaths over 60 years of age, against 115 last year.

The number of cases of principal reportable diseases were: diphtheria, 56; scarlet fever, 32; measles, 65; whooping cough, 6; typhoid fever, 2; tuberculosis, 77.

Included in the above were the following cases of non-residents: diphtheria, 3; scarlet fever, 2; tuberculosis, 7.

Total deaths from these diseases were: diphtheria, 3; whooping cough, 1; typhoid fever, 1; tuberculosis, 16.

Included in the above were the following deaths of non-residents: diphtheria, 1; tuberculosis, 2.

BOSTON HOMEOPATHIC SOCIETY. At the recent annual meeting of the Boston District of the Massachusetts Homeopathic Medical Society, the principal address was made by Dr. Benjamin T. Loring, the retiring president, on "Industrial Health Insurance." The following officers were elected for the ensuing year: president Dr. Walter T. Lee, Vice-Presidents, Dr. E. P. Ruggles and Dr. Catherine French; secretary, Dr. Harold Diehl, and treasurer, Dr. E. W. Smith.

MASSACHUSETTS COMMISSION ON MENTAL DISEASES.—The Massachusetts Commission on Mental Diseases, successor to the former State Board of Insanity, has recently issued its first annual report, in which emphasis is laid upon the rapid increase of the insane in this Commonwealth. Accommodation is now urgently needed for 658 more patients and 114 more nurses.

"On Oct. 1, 1916, there were 18,710 persons under the care of the commission, of whom 15,049 were insane, 2876 feeble-minded and 670 epileptic.

One of the most important of numerous recommendations is for the sale of Northampton State Hospital, selection of a new site and construction and furnishing of buildings thereon. A bill to this effect is submitted.

It is also proposed to extend and develop the psychopathic service by the establishment of hospital and outdoor units in different districts where institutions under the supervision of the commissions are located.

Several appropriations are asked for, after which bills are submitted as follows:

To provide measures to relieve shortage of nurses and employees in State institutions.

To authorize the commission to receive indigent and insane persons from other States.

To amend an act of 1916 relative to the commitment and discharge of feeble-minded patients.

To amend the law relative to private hospitals, under which licenses shall be annually granted by the commission, to expire on the last day of the calendar year, and providing for a fine not exceeding $500 for violation.

To amend the law relative to support of inmates in institutions under the supervision of the commission, temporary absence from institutions by permission and commitment of persons under indictment to State insane hospitals and the removal of insane prisoners."

SPRINGFIELD ACADEMY OF MEDICINE.—The January meeting of the Academy was held at 137½ State Street, on Tuesday, January 9th, at 8.15 p. m. Program:—

Dr. Walter R. Weiser: "A Few Hints About Your Malpractice Insurance."

Dr. Franklin W. White of Boston: "The Diagnosis and Treatment of Chronic Nephritis."

Academy Notes.

To those journals already in our library, we have added the following: *American Journal of Medical Sciences, American Journal of Obstetrics, Archives of Pediatrics, Surgery, Gynecology and Obstetrics, Medical Pickwick, Modern Hospital, Journal of the American Medical Association.*

We are indebted to Dr. H. A. Fiske for donating a number of medical books.

Some Academy bond holders have not as yet collected coupon No. 1. These were payable last July through any bank.

L. D. CHAPIN, *Secretary.*

Obituary.

WALTER JAMES DODD, M.D.

On the morning of the eighteenth of December, ninteen hundred sixteen, there ended a noble life of service and courage.

Walter James Dodd was born in London, England, forty-seven years ago. When a lad, he came to this country with his brother-in-law and sister, Mr. and Mrs. Charles Cummins, and attended the Cambridge schools. He then worked in the Chemical laboratory at Harvard under Professors Hill and Jackson, and in 1892 was appointed assistant apothecary at the Massachusetts General Hospital.

As soon as Roentgen made known to the world the discovery of the X-ray, Dodd began at the Hospital his studies of the ray, studies which were to make him an authority, and which were later to claim his life. The beginnings were small and disappointing; work at night with an agitated electric bulb with broken filament, a key, a camera, and photographic plates.

In 1896 he was made Hospital Apothecary.

Later this year the Hospital installed its first induction coil. The early tubes were very crude, and required hours and hours and days and days of pumping to secure satisfactory approach to a vacuum. He toiled, however, with his characteristic enthusiasm and perseverance, and was faithfully assisted by Mr. Joseph Godsoe. Four hundred plates had been made by April, 1897, when he was compelled by horrible burns of his face and hands to suspend his work. But he was undaunted and, as soon as he was physically able, gallantly resumed work. Neither was he daunted by much subsequent suffering nor by repeated periods of relinquishment enforced by physical disability. He continued his work cheerfully and with stoic fortitude to the end.

During this period of eighteen years, he submitted to nearly fifty operations of increasing severity, skillful conservative surgery done by his friend, Dr. Charles Allen Porter. Although he had had a severe operation only a short time before the departure of the Second Harvard Unit to France, and although his wound was still unhealed, he left with the expedition as he had agreed, and rendered tireless and invaluable service.

In 1900 and 1901 he studied at the Harvard Medical School. He was so much sought, however, for his knowledge of roentgenology that his studies were greatly interrupted, and upon advice he entered the Vermont Medical School, from which he graduated in 1908.

During this period, by special arrangement, he intermittently continued his work as apothecary, photographer, and roentgenologist at the Hospital, Mr. Godsoe serving in his absence. In 1908 he was officially appointed roentgenologist to the Massachusetts General Hospital, and shortly thereafter opened private offices for X-Ray work with Dr. Arial George. Soon afterwards he formed a partnership with Dr. Percy Brown, although they practised in separate offices.

Due to his valuable work, his department at the Hospital grew rapidly. Dr. George W. Holmes was made his assistant and soon his partner in private practice. His private practice likewise grew rapidly. He soon associated Dr. Lawrie Morrison with him, and recently Dr. Charles Edward Wells.

In September 1909, Dr. Dodd was appointed Instructor in the Use of Roentgen Ray at the Harvard Medical School, which position he held till 1913. He was then made Instructor in Roentgenology and held this position till his death.

In 1910 he married Miss Margaret Lea, of Moncton, N. B., who survives him.

He was a member of the American Roentgen Ray Society, American Medical Association, Massachusetts Medical Society, Aesculapian Club of Boston, and St. Botolph Club.

Funeral services were held at King's Chapel. The honorary pall-bearers were Dr. John Collins Warren, Dr. Samuel J. Mixter, Dr. Henry P. Wolcott, Mr. George Wigglesworth, Dr. Frederic A. Washburn, Dr. Edward H. Bradford, Dr. Herbert B. Howard, Dr. Charles Allen Porter, Dr. James Homer Wright, Dr. Elliott G. Brackett, Dr. Hugh Cabot, Dr. Richard C. Cabot, Dr. Eugene Cadwell, and Dr. Gregory Cole.

A pioneer in his work, an authority in it, a martyr to it; a man affectionately esteemed; modest, unselfish, courageous; a tireless, serious worker with a rare sense of humor, a natural sweetness, and a big heart which loved humanity; such a man was Walter James Dodd.

Untimely taken, we bow our heads and thank the Almighty for what He granted him. And it was much.

Torr Harmer.

WALTER.

(Walter J. Dodd, M.D.)

Walter is dead. The generation of Boston physicians now in their prime were medical students when he first came to them. Walter he was then to everybody in the Massachusetts General Hospital and Walter he has remained. The medical degree which he took in order to make himself one of us professionally could not bring him any nearer. "Dr. Dodd" came slowly to the lips, "Walter" was always there.

He began at the hospital as apothecary. Also he was official photographer. As a side interest he photographed group after group of house officers, took each surgeon and physician in turn with his medical retinue, photographed every nook and corner of the hospital grounds and lovingly photographed the old Bulfinch front time and time again and everything picturesque that went on within and without. Those of us who had cameras, and most of us did in those impressionable days, went to him for instruction in the use of them. He developed our plates and films and more than matched our enthusiasm over them. His photographs illustrated our first medical papers. Such work was always overtime work and usually was done at a time inconvenient to him. From the beginning, everyone picked his brains, broke in on his routine, and retold his stories.

Walter was more than a willing and generous man. The writer has never seen one who was braver or stronger. For twenty years he knew his fate and fought it step by step with open and dry eyes. He called upon surgery to put up the most stubborn fight on record in this vicinity. He received his x-ray burn when the x-ray first came out, and its power both for good and for harm was unknown. The wonder of the process fired his ready enthusiasm and he labored day and night in the little stone vault beneath the Bulfinch steps. The ghostly proceeding was made even more so

by this room, especially when held at the dead of night. Some have said that he was careless of himself after he knew his danger. Perhaps he was. He could not always wait to take precautions. His work came first, himself last. How magnificent he was through it all! Bit by bit the trained fingers stiffened, piece by piece they were taken away. Both hands practically gone, his friends vied with each other in lending him theirs. At the dinner table or at the club the place of honor was at his side.

He was fun-loving and musical. His cheerfulness equalled his bravery; both were without a flaw. In his work he was a pioneer, an expert and a leader. A day or two before he died, his mind wandered to his summer in France with the First Harvard Unit, and he was busy supervising the making of hospital supplies. True to type, he was thinking of his birth country (he was English) and of others.

By a strange happening, Walter, with a spirit brimming with light, spent many of his working hours in the dark room, in the first years developing films and plates and later taking his X-rays. The room, however, could not be wholly dark where he was. The room cannot be dark where he is now. Soon, one by one, those of us who knew him will enter the dark room too,—and Walter will be there.

M.

CHARLES HENRY RICE, M.D.

CHARLES HENRY RICE died at his home in Fitchburg, January 5, 1917, at the age of 73. He was born in Ashburnham, Mass., February 19, 1843, attended the public schools of Ashby and Appleton Academy, New Ispwich, N. H., and was graduated from Dartmouth College in 1865, and from Harvard Medical School in 1866, in the class with J. F. A. Adams, Robert Amory, John Green and Edwin B. Harvey.

He joined the State Medical Society in the same year and began a practice that was to continue for fifty years, in the city of Fitchburg, where he became the first city physician in 1873. When the board of Health was organized in 1890, he was the first chairman, holding the office for three years. Dr. Rice was one of the original board of trustees of the Burbank Hospital and served it for twenty-five years in that capacity, being also a member of the medical staff, 1895-1900, and of the consulting staff after that date.

He served his city as a member of the school committee and as one of the trustees of the Wallace Library for a long series of years. From 1884 to 1897 he was surgeon to the Sixth Regiment, M. V. M.; he was a Mason and belonged to the various degrees; he was a charter member of the Rollstone Congregational Church and was prominent in the church activities. He will be missed in Fitchburg.

Massachusetts Medical Society.

To the Fellows of the Massachusetts Medical Society:

THE following is the draft of the amendment to Section 5 of the Workmen's Compensation Act as finally revised and accepted by the Committee on Workmen's Compensation Act, ratified by the Committee on State and National Legislation of the Massachusetts Medical Society; and this week presented to the legislature, by a petition signed by Dr. Samuel B. Woodward, Chairman of the Committee on State and National Legislation of the Massachusetts Medical Society; by Dr. J. Emmons Briggs, President of the Massachusetts Homeopathic Medical Society; and by Dr. Arthur N. Broughton, Chairman of the Committee on Workmen's Compensation of the Massachusetts Medical Society. The bill is numbered Senate Bill 135, and has been referred to the Joint Judiciary Committee.

"During the first two weeks after the injury, and, if the employee is not immediately incapacitated thereby from earning full wages, then from the time of such incapacity, and in unusual cases, in the discretion of the Board, for a longer period, the Association shall furnish *adequate* and reasonable medical and hospital services and medicines, when they are needed. *The employee shall have the right to select a physician other than the one provided by the Association, and in the event that he shall be treated by a physician of his own selection,* or, where, in case of emergency, or for other justifiable cause, a physician other than the one provided by the Association is called in to treat the injured employee, the reasonable cost of his services shall be paid by the Association, subject to the approval of the Industrial Accident Board. Such approval shall be granted only after the Board finds that the employee was so treated by such physician, or that there was such justifiable cause, and, in all cases, that the services were *adequate* and the charges reasonable."

The proposed changes in the law represent the best thought of the two committees on the subject and they will work together in the effort to place the amendment on the statute book. Each individual physician should feel sufficient interest in the passage of this amendment personally to see or communicate with his Senator and Representatives and put the matter to them in a manner so unequivocal as to leave no possibility of a misunderstanding.

The proposed amendment finds its justification in certain evils which the present law permits, viz.:

(1) The Insurance Company "furnishes" the medical care, and under the famous "Pecott decision" need not pay for any service other than that so furnished (save in "emergencies or other

justifiable cause") whether that be adequate or not. In certain industrial centers the accident work is awarded to the lowest bidder without, so far as we have evidence, any consideration being paid to his special qualifications for the work. (Only three of the companies stand absolutely on this right, but they control more than half of the work.)

(2) If the injured workman refuses the service "furnished" he sacrifices the benefits of the Act, and in many industries he is compelled by his employer to accept the services of the insurance contract doctor or lose his job. To be compelled to submit to the treatment of a surgeon in whom one has no confidence, either because of his incompetence or harshness, or for any other reason, is an infringement of personal liberty and property rights, since a workman's body is his own, the employer only *hires his services* and *insures his ability to do work.*

(3) It allows the insurance companies to "work" the free clinics to their own profit.

(4) It discriminates against certain physicians, although all, by virtue of their licenses, are equal before the law, and arbitrarily deprives them of potential income from their regular patients when such patients become the victims of industrial accidents.

The section as amended is fundamentally right because based on the principles of liberty, equity and justice. Its insistence that the treatment be adequate will bear with equal weight on the ill-qualified insurance doctor and the ill-qualified, careless or dishonest physician of the workman's choice. It will bear as heavily on the surgeon of ability who delegates his work to an inefficient nurse as on the newest graduate. All depends upon the quality of the work—inadequate work need not be paid for. This should result in more efficient care of industrial accidents all along the line, as a consequence of which the costs of compensation should materially decrease. Its provision for the right to the services of a physician of the workman's own selection corrects the injustice to the workman of being compelled to submit to such treatment as the company provides, and the injustice to the physician of having his patients diverted from him.

The amended law should not operate to interfere with the excellent accident services which a few progressive industries maintain, because the ordinary workingman has sufficient sense to accept treatment which is at hand, provided it be efficient and decent.

The objection that expense of medical care will be increased is met by the probability that shortening of the period of compensation will result from better service. Be that as it may, *if the costs of a law that is right and just* are too great to be borne the law should be given up, not compromised by injustice and the exploitation of its intended beneficiaries by corporations *interested primarily in the investment possibilities.*

Respectfully submitted,

ERNEST L. HUNT,
Member from Worcester District of the Committee on Workmen's Compensation Act of Massachusetts Medical Society.

The above letter, sent by Dr. Hunt to the members of the Worcester District Medical Society, so concisely gives the present status of the work done by the Committee on Workmen's Compensation, as to deserve publication.

ARTHUR N. BROUGHTON, *Chairman.*

Correspondence.

FAILURE TO REPORT OPHTHALMIA NEONATORUM.

Commonwealth of Massachusetts,
Board of Registration in Medicine,
State House, Boston.
January 3, 1917.

Mr. Editor:

The attention of the Board of Registration in Medicine has been called to the conviction of a registered practitioner of this state, for failure to report a case of ophthalmia neonatorum.

A hearing was given to this physician at which time he was given an opportunity to show cause why his certificate of registration should not be revoked, and his registration cancelled.

A consideration of all the circumstances seemed to justify this Board in not taking drastic action at this time, and the case was placed on file, to be taken up at any time if the future behavior of this physician is unsatisfactory.

The attention of the profession is called to the fact that failure to comply with a law so important as that requiring the reporting of cases of ophthalmia neonatorum, will be regarded by this Board as a serious offence, and may result in the revocation of the certificate of any registered physician who violates this law.

Respectfully,

WALTER P. BOWERS, M.D., *Secretary.*

CHANGES IN THE MEDICAL CORPS U. S. NAVY FOR THE FOUR WEEKS ENDING JANUARY 6, 1917.

December 2, 1916.

Asst. Surgeon Daniel Hunt, detached *Florida* to Navy Recruiting Station, Jackson, Miss.

December 13.

Surgeon H. E. Odell, detached Yokohama Hospital to home and wait orders.

Surgeon A. M. Fauntleroy, detached Naval Medical School, Washington, D.C., Jan. 29, 1917, to command Yokohama Hospital.

December 14.

P. A. Surgeon W. H. Short, detached *Oregon* to home wait orders.

P. A. Surgeon J. O. Downey, detached Navy Yard, Mare Island, Cal., to *Oregon* December 28, 1916.

Asst. Surgeon J. H. Durcett, to Navy Recruiting Station, New Orleans, La., January 2, 1917.

Asst. Surgeon E. C. Carr, to Naval Recruiting Station, Nashville, Tennessee.

December 16.

Asst. Surgeon K. E. Lowman, to Navy Recruiting Station, Scranton, Pa., Jan. 2, 1917.

December 19.

P. A. Surgeon G. E. Thomas, detached *Utah* to *Tallahassee.*

P. A. Surgeon H. W. Smith, detached *Nevada* to *North Carolina*.

P. A. Surgeon W. G. Steadman, detached Naval Hospital, Mare Island, Cal., to *Milwaukee*.

P. A. Surgeon G. F. Cottle, detached *North Carolina* to Bureau of Medicine and Surgery, Navy Department, Washington, D.C.

Asst. Surgeon H. Priest, detached *Tallahassee* to Navy Recruiting Station, Montgomery, Alabama.

Asst. Surgeon R. M. Waterhouse, detached *Melville* to *Nevada*.

December 27.

E. O. J. Eytinge, detached *Milwaukee* to 6 months' sick leave.

January 2, 1917.

P. A. Surgeon R. A. Warner, detached *New York* to *Connecticut*.

January 4.

Surgeon J. S. Taylor, detached *Connecticut* to Bureau of Medicine and Surgery, Navy Department, Washington, D.C.

P. A. Surgeon H. W. Cole, Jr., detached *San Diego* to home and wait orders.

SOCIETY NOTICES.

BOSTON MEDICAL LIBRARY in conjunction with the SUFFOLK DISTRICT MEDICAL SOCIETY.—A general meeting will be held in John Ware hall, Wednesday, Jan. 17, 1917, at 8.15 P.M. Subject: "Some Factors in the Hypersensitiveness of Man to Foreign Proteids," by Warfield T. Longcope, M.D., New York. Illustrated by the stereopticon. Light refreshments after the meeting.

C. FROTHINGHAM, JR., M.D.,
F. G. BRIGHAM, M.D.,
W. E. LADD, M.D.
} *Committee on Medical and Social Meetings for the Boston Medical Library*

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.—The regular midwinter meeting of the Society will be held at the Boston Medical Library on Wednesday, Jan. 17, at 12 o'clock, noon. Papers: Dr. Donald B. Armstrong of Framingham, on "Framingham Community Health and Tuberculosis Demonstration"; Dr. W. R. MacAusland of Boston, on "Fractures from the Standpoint of the Orthopedic Surgeon," with lantern slides. Lunch will be served at 1.15 P.M.

LYMAN S. HAPGOOD, M.D., *Secretary.*

HAMPDEN DISTRICT MEDICAL SOCIETY.—She regular winter meeting of the Hampden District Medical Society will be held at Hotel Worthy, Springfield, Mass., on Tuesday, January 23, at 4 P.M. Papers for the afternoon: "Fresh Air: What It Is, and Its Effect on Children," Dr. A. C. Eastman: "Drainage," Dr. W. R. Welser; "Intraspinal Treatment of Cerebro-Spinal Syphilis," Dr. P. Kilroy. Dr. Alfred Worcester of Waltham will be the guest of the Society at this meeting. Dinner at 6 P.M. at expense of the Society.

HERVEY L. SMITH, *Secretary and Treasurer.*

NEW ENGLAND PEDIATRIC SOCIETY.—The forty-sixth meeting of the New England Pediatric Society will be held in the Boston Medical Library, Friday, Jan. 26, 1917, at 8.15 P.M. The following papers will be read: (1) President's address: "Health Insurance in Relation to Pediatrics," Maynard Ladd, M.D., Boston; (2) "Congenital Malformations of the Bladder and Rectum," James S. Stone, M.D., Boston; (3) "Congenital Heart Disease," Charles H. Dunn, M.D., Boston; (4) "Are Carious Teeth an Etiological Factor in Heart Disease?" E. W. Barron, M.D., Malden.

Light refreshments will be served after the meeting.

MAYNARD LADD, M.D., *President.*
RICHARD M. SMITH, M.D., *Secretary.*

SCHOOL FOR HEALTH OFFICERS.

HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Special Lectures for the Month of January, 1917.

Attention is called to the fact that some of the lectures are to be given in the Department of Biology and Public Health, Massachusetts Institute of Technology. Such lectures are marked "M. I. T." The lectures marked "H. M. S." will be given in the amphitheatre of Building E, Harvard Medical School. All lectures will be given promptly at five o'clock.

Date.	*Subject.*	*Lecturer.*	*Place.*
January 11,	Sanitary Law,	Prof. Eugene Wambaugh,	M. I. T.
" 15,	Oral Hygiene,	Dr. W. H. Potter,	H. M. S.
" 16,	Sanitary Law,	Prof. Wambaugh,	M. I. T.
" 17,	Oral Hygiene,	Dr. Potter,	H. M. S.
" 18,	Sanitary Law,	Prof. Wambaugh,	M. I. T.
" 19,	Infant Mortality,	Dr. J. L. Morse	H. M. S.
" 23,	Sanitary Law,	Prof. Wambaugh,	M. I. T.
" 24,	Venereal Prophylaxis,	Dr. Hugh Cabot,	H. M. S.
" 25,	Sanitary Law,	Prof. Wambaugh,	M. I. T.
" 26,	Infant Mortality,	Dr. Morse,	H. M. S.
" 30,	Sanitary Law,	Prof. Wambaugh,	M. I. T.
" 31,	Venereal Prophylaxis,	Dr. Cabot,	H. M. S.

The lectures on Sanitary Law will be continued in February.

RESIGNATIONS AND APPOINTMENTS.

DR. W. PORTER PRATT has resigned as clerk of the Quincy Board of Health and DR. MICHAEL T. SWEENEY has been appointed to succeed him.

RECENT DEATHS.

JOSEPH WEATHERHEAD WARREN, M.D., who died recently at Harrisburg, Pa., was born in Springfield, Mass., on June 24, 1849. After graduating from Phillips Exeter Academy and from Harvard College in 1871, he studied medicine at Leipzig and Bonn and became a practitioner of medicine in Germany in 1879. Returning to Boston in 1881 he taught for ten years in the Harvard Medical School and in 1891 was appointed professor of physiology at Bryn Mawr College. This position he held until 1914, when he resigned to become an official of the Pennsylvania State Department of Health.

W. C. KLUTTZ, M.D., who died of typhus fever at El Paso, Texas, on Jan. 4, was a native of Salisbury, N. C. He was city health officer of El Paso and became infected while endeavoring to eradicate typhus fever brought to the United States frontier by Mexican refugees.

DR. GEORGE CLARY, who died on December 30, 1916, at New Britain, Conn., was born in 1830. He was graduated from Dartmouth College in 1859, and received the degree of M.D. from the Yale Medical School. Throughout the Civil War he served as surgeon of the Thirteenth Connecticut Regiment.

DR. WENDELL REBER, who died on December 30, 1916, at Philadelphia, was born in 1866. He was widely known as an ophthalmologist and was a former president of the Americal Academy of Ophthalmology and Otolaryngology. He was the only American member of the council of the Ophthalmological Congress at Oxford, England. He was a frequent and extensive contributor to current ophthalmological literature.

DR. CLAUDE E. WHEELER, who died of broncho-pneumonia on December 30, in New York City, was born at Montreal in 1864, the son of a physician. After graduating from Laval University, Quebec, he received the degree of M.D., from McGill University, Montreal. After practicing his profession for a short time at Burlington, Vt., he removed to New York City in 1890, where he became known as an ophthalmologist. In 1909 he was appointed editor of the *New York Medical Journal* and held that position at the time of his death.